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ABSTRACT

An annual compilation, this report contains summaries of more than 1,000 reading related studies. The summaries are arranged in five categories: teacher preparation and practice, the sociology of reading, the physiology and psychology of reading, reading instruction, and the reading of atypical readers. Specific topics covered in the summaries include (1) teacher attitudes toward reading; (2) preservice and inservice teacher preparation; (3) teacher roles; (4) the role and use of mass media in reading instruction; (5) readability and legibility; (6) the role, development, and use of libraries; (7) reading in nonschool settings; (8) freedom of press and censorship; (9) research methodology; (10) sex differences in reading; (11) intellectual abilities and reading; (12) visual perception; (13) oral reading; (14) personality, self-concept, and reading; (15) reading rate; (16) corrective and remedial reading; (17) television and reading instruction; (18) reading diagnosis; (19) content area reading; and (20) reading and language abilities. (FL)

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Annual

Summary of investigations relating to reading July 1, 1980 to June 30, 1981

SAM WEINTRAUB, HELEN K. SMITH, GUS P. PLESSAS, NANCY L. ROSER, WALTER R. HILL and MICHAEL W. KIBBY

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Research in reading: A century of inquiry

Research in reading has been reported in hundreds of journals and books since 1880. A few of the studies have turned out to be exemplary or classics (Berger & Andolina, 1978), others have influenced practices in reading (Russell, 1961), some *should* have influenced practices in reading (Singer, 1970), and many have been forgotten.

Summaries of reading research have greatly simplified the task of locating studies pertaining to reading. Thanks to the genius and foresight of William S. Gray, a process was begun that, to this day, provides a reasonably comprehensive review of the directions and trends throughout a century of reading research.

These summaries of reading research have profited both students and scholars who are interested in the serious study of research reports that have a bearing on reading. After a century of research in reading, it seems appropriate, for both historical and heuristic reasons, to present a descriptive account of the summaries of reading research. This description should enable professionals to appreciate the efforts of those individuals who compiled the summaries throughout the years in an effort to provide a comprehensive picture of research in reading.

Beginnings: The first summary

In 1925, William Scott Gray authored the first summary of reading research in *Summary of investigations relating to reading*. The purpose of that publication was "...to summarize for the use of teachers, supervisors, and investigators the results of scientific studies relating to the problems of reading instruction" (Gray, 1925, p. 1). Gray hoped that the summary would serve two purposes. First, that it would provide school officers and teachers with facts and principles that could then be considered in efforts to reorganize courses of study in reading or to improve the teaching of reading. Second, that the summary would indicate progress in the scientific study of reading and suggest additional problems for investigation.

Gray based his summary on the published reports of most of the reading investigations made in the United States and England prior to July, 1924. A total of 436 scientific studies are included in the summary covering the period from 1880 to 1924 (one was not dated).

The earliest study identified by Gray was a two-page study reported in *Mental evolution in animals* (1884) by George John Romanes. In that book, Romanes discussed the results of reading tests given to determine the relationship between rate and comprehension in silent reading.

Gray's summary was organized into 15 major problems or phases of reading instruction (for example, children's interest in reading, oral reading, diagnosis and remedial instruction, and reading tests and measurements). Complete with an index, the summary comprised 275 pages.

Later summaries

In subsequent years Gray continued to prepare an annual summary until his death in September, 1960. Helen M. Robinson then assumed the authorship of the annual summary and remained its major author and editor until 1968. At that time Sam Weintraub assumed the responsibility for spearheading the annual summary and continues to serve in that capacity through the most recent annual summary (July 1, 1979 - June 30, 1980).

Over the years the annual summary has appeared in six different publications or professional journals. Table 1 contains the sources for the summaries of research relating to reading. The first summary appeared as a monograph published by the University of Chicago in 1925. Subsequent summaries were presented in four different professional journals. The first annual summary was contained in the February, March, April, and May, 1925, issues of *The Elementary School Journal* (volume 26).

In 1931, the annual summary that Gray authored appeared in the *Journal of Educational Research*. Until 1940, he used topical heads to organize the summary. Then, in 1941, he changed the format to include four major categories. Evidence of these categories (social uses and effects of reading, interest and growth of pupils in reading, teaching of reading, and physiology and psychology of reading) can still be found in the most recent annual summary.

Table 1 Sources for summaries of research related to reading

Period	Source of Research Summary
Prior to 1924	*Summary of investigations relating to reading*
July 1, 1924 - June 30, 1931	*The Elementary School Journal*
July 1, 1931 - June 30, 1960	*Journal of Educational Research*
July 1, 1960 - June 30, 1964	*The Reading Teacher*
July 1, 1964 - June 30, 1978	*Reading Research Quarterly*
Since July 1, 1978	*Annual summary of investigations relating to reading*

Following Gray's death, Helen M. Robinson, one of his former students and a colleague, completed the summary for 1959-1960. Robinson moved the summary to *The Reading Teacher* and later, when the *Reading Research Quarterly* was founded, the annual summary appeared in that journal.

The summary for the period July 1, 1978 to June 30, 1979 added a new dimension to the investigations. For the first time since the original monograph, the annual summary appeared as a separate publication. That publication, the *Annual summary of investigations relating to reading*, bears a title very similar to Gray's original monograph.

Quantity of reading research

Although the annual summaries were probably never intended to be all inclusive, it seems reasonable to conclude that they have summarized most of

the reading-related studies reported in journals and other printed sources. Table 2 lists the number of studies reported in the annual summaries from the sources identified in Table 1. From a meager beginning in 1884, when one study was reported, the annual summary for 1979-1980 contains 1,165 reports of reading research. To date, approximately 12,750 research studies have appeared in the summaries. Although there have been variations in the number reported over the last one hundred years, the most substantial increases have been reported in recent years.

Table 2 Investigations relating to reading since 1880

Period	Number of Studies	Cumulative Frequency	Period	Number of Studies	Cumulative Frequency
1884-1885	1	1	1948-1949	92	2865
1886-1890	1	2	1949-1950	98	2963
1891-1895	2	4	1950-1951	94	3057
1896-1900	10	14	1951-1952	91	3148
1901-1905	6	20	1952-1953	123	3271
1906-1910	14	34	1953-1954	84	3355
1911-1915	49	83	1954-1955	91	3446
1916-1920	151	234	1955-1956	116	3562
1921-1924	201	435†	1956-1957	96	3658
1924-1925	73	508	1957-1958	118	3776
1925-1926	56	564	1958-1959	120	3896
1926-1927	113	677	1959-1960	101	3997
1927-1928	101	778	1960-1961	144	4141
1928-1929	113	891	1961-1962	180	4321
1929-1930	107	998	1962-1963	185	4506
1930-1931	115	1113	1963-1964	264	4770
1931-1932	118	1231	1964-1965	236	5006
1932-1933	94	1325	1965-1966	306	5312
1933-1934	95	1420	1966-1967	310	5622
1934-1935	112	1532	1967-1968	376	5998
1935-1936	100	1632	1968-1969	416	6414
1936-1937	95	1727	1969-1970	341	6755
1937-1938	98	1825	1970-1971	307	7062
1938-1939	126	1951	1971-1972	302	7364
1939-1940	119	2070	1972-1973	369	7733
1940-1941	114	2184	1973-1974	431	8164
1941-1942	114	2298	1974-1975	558	8722
1942-1943	110	2408	1975-1976	599	9321
1943-1944	54	2462	1976-1977	638	9959
1944-1945	70	2532	1977-1978	554	10,513
1945-1946	72	2604	1978-1979	1078	11,591
1946-1947	80	2684	1979-1980	1165	12,756
1947-1948	89	2773			

† Does not include one undated study summarized by Gray in his first summary.

Table 3 contains the number of studies by decade. When Gray compiled the first summary, he included studies from 1880 to July, 1924. In 1926, when an *annual* summary was published, it covered the period from July 1, 1924, to June 30, 1925. All subsequent summaries covered the period from July of one year to the end of June of the next year. This fact should be kept in mind when reviewing the studies reported for the decade.

Table 3 Investigations relating to reading by decade

Decade	Number of Studies	Cumulative Frequency
1880-1890	2	2
1891-1900	12	14
1901-1910	20	34
1911-1920	200	234
1921-1930†	764	998
1931-1940‡	1072	2070
1941-1950	893	2963
1951-1960	1034	3997
1961-1970	2758	6755
1971-1980	6001	12,756

† Includes studies from 1921 through June 30, 1930.

‡ Includes studies from July 1, 1930 through June 30, 1940. Numbers in subsequent decades follow this same pattern.

Table 3 shows that there has been an increase in the number of studies published in each decade, except for the decades that covered and immediately followed World War II. Perhaps the most dramatic increase occurred in the years from 1971-1980. This decade contains approximately the same number of studies as *all* previous decades combined. The reasons for this increase, especially since the 1978 summary, have been explored by Weintraub (1981).

Concluding comment

Undertaking a review of this nature has developed within this writer a profound respect for those professionals connected with the summaries over the years. The initial need for a review of investigations relating to reading was sensed by Gray. His original summary set the stage. His ability to conceptualize a scheme to categorize the research studies has withstood the test of time. Although several changes and refinements have occurred in the long history of the summary, his impact is still in evidence.

In the early annual summaries, Gray frequently included studies from previous years that were unknowingly overlooked at the time and later brought to his attention. That same attention to detail is still evident in the most recent summary. The quest for a thorough summary of all reading-related research bestows honor to all those who conduct such research. But to be truly worthy of that honor, researchers must conduct well-conceived and carefully executed studies. If such studies are conducted, the next century of research in

reading may unravel many of the mysteries and problems relating to reading. Or, as Huey (1908, p. 5) said, "...Problem enough, this, for a life's work, to learn how we read!"

Jerry L. Johns
Northern Illinois University

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HUEY, EDMUND BURKE. *The psychology and pedagogy of reading*. New York: Macmillan, 1908. Republished by M.I.T. Press, 1968.

RUSSELL, DAVID H. Reading research that makes a difference. *Elementary English*, April, 1961, *38*, 74-78.

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WEINTRAUB, SAM; SMITH, HELEN K.; ROSER, NANCY; HILL, WALTER R.; & KIBBY, MICHAEL W. *Summary of investigations relating to reading July 1, 1979 to June 30, 1980*. Newark: International Reading Association, 1981.

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Summary of investigations relating to reading

*July 1, 1980 to June 30, 1981**

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SUMMARIZES APPROXIMATELY 850 reports of reading research published between July 1, 1980, and June 30, 1981. The research studies are categorized into six major areas, five of which have been further subcategorized. The majority of studies reported were classified into the Physiology and Psychology of Reading area. Large subdivisions under that major category include Experiments in Learning, Vocabulary and Word Identification, and Factors Related to Reading Disability. Large groupings of studies in the Sociology of reading are concerned with the content analysis of printed materials and the use of mass media. Under the Teaching of Reading category, the subcategory Testing remains the largest. A listing of other general bibliographies of reading research appears as the first major category of the present summary.

* The authors are indebted to Marion Dokes at Texas Woman's University and to Mary Ann Doyle at the State University of New York at Buffalo for the major work of identifying articles. Primary financial support for the annual summary is provided by the International Reading Association. Additional funding is supplied by the Alvina Treut Burrows Institute, Inc. To Margaret Collins, who serves as the secretary for the summary, our special thanks. And to the late Julia Schneider, who served in that capacity for a number of years, I would like to dedicate this issue.

I. Summaries of reading research

Only general summaries of reading research have been placed in this category. Summaries of specific research areas have been placed in the appropriate subcategory.

BENTLEY, DIANA, & GOODACRE, ELIZABETH J. *British register of reading research,* No. 5. Reading, Berks.: University of Reading School of Education, Summer 1980.

Lists 388 completed or ongoing studies of reading conducted in Great Britain and commencing in 1972 or later. For each study the following are provided: name of the researcher(s), title of the study, institution where the study was or is being conducted, the year the study started and the type of research (e.g., doctoral study, funding source). Also cites where abstracts of 195 of these projects may be found and provides abstracts for 31 others.

DIETRICH, DANIEL J., & BEHM, RICHARD H. Annotated bibliography of research in the teaching of English: July through December 1980. *Research in the Teaching of English,* May 1981, *15*(2), 175-191.

Presents an annotated bibliography of published and unpublished studies in the teaching of English. All references are indexed in *Resources in Education* and are classified into one of four categories: language, literature and media study, writing, and teacher education.

DIETERICH, DANIEL J., & BEHM, RICHARD H. Annoted bibliography of research in the teaching of English: January through June 1980. *Research in the Teaching of English,* December 1980, *14*(4), 345-379.

Presents an annotated bibliography of published and unpublished studies in the teaching of English. All references are indexed in *Resources in Education* and are classified into one of six categories: bilingualism and bidialectalism, language and verbal learning, literature, humanities and media, teacher education, testing and evaluation, and written and oral communication.

GOODACRE, ELIZABETH. Reading research in Great Britain—1979. *Reading (UKRA),* December 1980, *14*, 3-11.

Reviews research published in Great Britain in 1979. In addition to British journals, the author also cites references from the proceedings of UKRA's fifteenth annual conference. References are classified into one of five categories: reading standards and tests, dyslexia and specific reading retardation, remedial reading and provision, reading development, and reading materials.

GOODACRE, ELIZABETH J. Reading research review 1979. Reading, Berks.: University of Reading School of Education, 1979.

Reviews research published in Great Britain in 1979. In addition to British journals, the author also cites references from the proceedings of UKRA's fifteenth annual conference. References are classified into one of five categories: reading standards and tests, dyslexia and specific reading retardation, remedial reading and provision, reading development, and reading materials. An annotated bibliography is included.

WEINTRAUB, SAM; SMITH, HELEN K.; ROSER, NANCY L.; HILL, WALTER R.; & KIBBY, MICHAEL W. *Summary of investigations relating to reading July 1, 1979 to June 30, 1980.* Newark, Delaware: International Reading Association, 1981.

Annotates about 1200 published research reports in reading. The research is categorized under six major headings with additional subcategories.

II. Teacher preparation and practice

II-1 Behavior, performance and knowledge, practices, effectiveness

TAYLOR, GAIL COHEN. Findings from research on teacher effectiveness. *The Reading Teacher*, March 1981, *34*, 726–730.

Reports interpretations of findings from teacher effectiveness research as reported in research reviews and in descriptions of original research. Limitations of existing teacher effectiveness research are reported. The author noted that a significant beginning has been made towards aiding educators in discovering those teaching practices which may be effective in different settings and for different purposes.

RUPLEY, WILLIAM H., & BLAIR, TIMOTHY R. Teacher effectiveness research in reading instruction: early efforts to present focus. *Reading Psychology*, November 1980, *2*, 49–56.

Reviews and comments on the findings of two major research studies conducted within the past 50 years focusing on teacher effectiveness in reading instruction. The review includes detailed findings of studies by William S. Gray and Arthur Gates, followed by a summary of the focus of teacher effectiveness research to the present. A major trend in reading teacher effectiveness was research focusing on instructional methods and materials, teacher characteristics, and universal traits. Many studies were attempting to identify teacher proof methods and materials. These investigations did not result in very promising findings. Neither were studies viewing characteristics such as teachers' personality traits, sex, education, and others particularly successful in identifying useful data. The authors view process-product research as a promising direction in this area.

BOCKMILLER, PATRICIA R., & COLEY, JOAN D. A survey of methods, materials, and teacher preparation among teachers of reading to the hearing impaired. *The Reading Teacher*, February 1981, *34*, 526–529.

Reports a survey of 395 teachers of reading to the hearing impaired in order to determine the characteristics of those teachers, the methods they use, and how well prepared they feel to use a variety of methods and materials to teach reading. One-third of the teachers had more than nine years experience and one-third had three or fewer years experience in teaching the hearing impaired. Over 75% had state certification and over 50% had Master's degrees. Of the total sample, two-fifths had either one or no reading course in their undergraduate program; similarly, two-fifths had no graduate work in reading. Nearly half reported using basal readers as the main instructional material. Sixty-eight percent of the teachers felt most prepared to use the basal reader as compared with other materials and approaches.

SARACHO, OLIVIA N., & DAYTON, C. MITCHELL. Relationship of teachers' cognitive styles to pupils' academic achievement gains. *Journal of Educational Psychology*, August 1980, *72*, 544–549.

Explores the relationship between teachers' cognitive styles (field-dependence vs. field-independence) and their pupils' academic achievement gains. Eighteen second-grade teachers, 18 fifth-grade teachers, and 432 children were tested for cognitive style on the *Embedded Figures Test*. Children and teachers with similar cognitive styles were considered matched, whereas children and teachers with different cognitive styles were considered mismatched. The *Comprehensive Tests of Basic Skills* were administered twice during a 12-month period. Results indicated significant effects on gains due to teachers' cognitive style: children with field-independent teachers showed greater achievement gains than children with field-dependent teachers. No significant main or interaction effect was associated with the matching variable or with grade level.

KELLY, DELOS H., & GROVE, WINTHROP D. Teachers' nominations and the production of academic "misfits." *Education*, Spring 1981, *101*, 246–263.

Attempts to determine and analyze the academic criteria and non-academic criteria applied in the nomination of pupils for placement in a remedial reading program. The teachers of 665 pupils enrolled in grades five through eight of a middle school were asked to list all pupils they felt should be placed in a remedial reading program. No criteria for inclusion were stated nor were teachers asked to supply any. A total of 83 pupils were recommended; 74 were already in the program. The school's reading specialist was then asked to develop a list of all pupils who would benefit from additional help in reading. The specialist's list was based on scores on *The Stanford Achievement Test* (SAT) and *The Stanford Diagnostic Reading Test* (SDRT). Three categories of pupils were developed: 1) those scoring two or more years below grade placement in terms of SDRT reading score; 2) those scoring one or more years but less than two years below grade level; and 3) those not meeting standards. Forty-eight pupils met the criteria for placement (category 1) in remedial reading and another 52 possibly met the criteria. The authors then identified four academic measures available to teachers: I.Q., comprehensive SAT scores, total SDRT scores, and reading averages. Each set of scores was divided into a low, average, and high grouping. In addition, six non-academic items were analyzed: sex, past enrollment in remedial reading, socioeconomic status, number of years failed, academic track position, and student misconduct. All of the academic measures were found to be significantly related to teachers' nominations with gamma coefficients ranging from −.74 for I.Q. to −.63 for reading averages. All non-academic factors were also significantly related to teachers' nominations and the coefficients ranged from −.21 for sex to .92 for the remedial reading factor. Further analyses suggested that involvement in prior remedial reading programs was a potent criterion in the teacher nomination process. The total combination of variables accounted for 29.5% of the explained variance. Prior remedial reading contact emerged as the most powerful predictor of teachers' nominations. Number of years failed and reading average also made significant contributions to teachers' nominations.

ELIJAH, DAVID. Teacher expectations: determinants of pupil's reading achievement. *Reading Improvement*, Summer 1980, *17*, 117–121.

Investigates the extent to which teacher expectations influence reading performance of first graders and examines the relationship between students' socioeconomic levels and teacher expectations. Sixty-four randomly selected first grade children from 26 classrooms in Oklahoma who scored one standard deviation below the mean scores for their class on the *Metropolitan Readiness Tests* and who ranked in either the top or bottom third of their classroom when ranked by a socioeconomic index served as subjects. Rankings as to level of reading readiness were collected from classroom teachers on a form provided by the researcher during the third week of school. The occupations for the head of the family had been recorded on the same form. Results of the initial administration of the Metropolitan were returned to the teacher during the sixth week of school. The reported results contained 32 scores which had been falsified by raising each score two standard deviations. After receiving falsified scores, the teachers completed readiness rankings again. After eight weeks and six months, the *Stanford Achievement Test*, Primary 1, was administered. No significant differences were found between groups: teacher rankings of readiness were as reliable as readiness test scores, and teacher expectations were not altered by socioeconomic or falsified data.

ROSE, JANET S., & MEDWAY, FREDERICK J. Measurement of teachers' beliefs in their control over student outcome. *The Journal of Educational Psychology*, January/February 1981, *74*, 185–190.

Describes the development and validation procedures for the *Teacher Locus of Control* (TLC) Scale, an instrument designed to measure elementary teachers'

perceptions of control in the classroom. The 28-item forced choice scale provides separate scores for teacher beliefs of internal and external responsibility for student success and failure. Higher scores indicate a greater tendency to accept personal responsibility for classroom events. The TLC scale showed moderate correlations with Rotter's more general *Internal-External Locus of Control Scale*, but the TLC scale yielded higher correlations with classroom teaching behaviors, including such practices as providing appropriate numbers of reading groups and using a variety of materials. One validation study indicated that the scale predicted 45 teachers' behaviors in the classroom, including their willingness to adopt new instructional techniques following inservice training.

LASS, BONNIE. What research says about the quality reading teacher. *Educational Technology*, June 1981, *21* (6), 28–31.

Reviews and reflects on qualitative and quantitative studies of reading teacher-effectiveness and summarizes some literature reviews on aspects of reading instruction. A view of a quality reading teacher is extracted from the data display and presented as an experienced professional, knowledgeable about the content of instruction and an efficient organizer of time. The quality teacher appears to keep students involved and to be competent in diagnosing needs and monitoring progress. His or her attitude is expectant and warm, but relaxed and task-oriented. The quality teacher appears to employ appropriate materials to goal- and skill-centered instruction, appears open to new learning, and is capable of providing students with well-developed lessons.

ELBAZ, FREEMA. The teacher's "practical knowledge": report of a case study. *Curriculum Inquiry*, Spring 1981, *11*, 43–71.

Reports a case study of a secondary reading and learning skills teacher in an effort to describe the teacher as a source of practical knowledge in the classroom. The researcher's conception of practical knowledge encompassed both knowledge *of* practical and knowledge mediated *by* practice. Based upon the assumption that teachers have a broad base of knowledge of content, its organization and its structure, and of curriculum, of practice, and of self, the researcher attempted to exemplify and embody the conception of practical knowledge and to account for it from a teacher's perspective. The case study teacher participated in five informal interviews from one to two hours each, supplemented by two classroom observations. Based on transcripts and joint discussions, the teacher was characterized in her orientation toward practical knowledge, the structure and generalizability of practical knowledge, and her cognitive style.

NARANG, HARBANS LAL. Factors associated with teacher knowledge of reading at the secondary level. *Reading Horizons*, Fall 1980, *21*, 55–60.

Examines the status of teacher knowledge of reading at the secondary level and investigates factors which may have contributed to that knowledge. The *Test of Teacher Knowledge of Reading* was administered to 188 persons enrolled in undergraduate and graduate courses at the University of Oregon. Comparisons of mean scores revealed significant differences ($p < .05$) between preservice and inservice teachers' performances, favoring the inservice teachers. Persons with one reading course achieved significantly higher than those without a course. No significant differences were found between males and females, between teachers of senior high and junior high, nor for the effects of experience or content field specialization.

ELLSWORTH, RANDY, & MILLER, JOHN W. A validation study of the inventory of teacher knowledge of reading. *Educational and Psychological Measurement*, Summer 1980, *40*, 537–542.

Examines the reliability and construct validity of the revised version of the *Inventory of Teacher Knowledge of Reading*. In order to ascertain the extent to which the revision differentiated among teachers with respect to experience, graduate hours,

graduate reading courses, and grade level taught, the inventory was administered to 304 Kansas elementary teachers. One-way analyses of variance indicated that the Inventory is capable of making distinctions among groups of teachers on each of the dimensions cited. The more experience a teacher had, the more measurable was the content knowledge possessed. This trend held for the degree level the teacher had attained and for the amount of specific coursework in reading. Grade level taught was an indicator of increasing knowledge of reading from first to fourth grade, but fifth and sixth grade teachers reversed the trend with lower scores than for any grade level other than kindergarten. Internal consistency reliability was estimated at .91.

BAGFORD, JACK. Evaluating teachers on reading instruction. *The Reading Teacher*, January 1981, *34*, 400–404.

Describes how a central Iowa school district evaluated the methods used by its teachers during reading instruction. The *Teacher Classroom Behavior Inventory* (TCBI) was developed to measure changes in teaching methods by focusing on specific sets of effective teacher behaviors supported by research and expert opinion. The 13 behavior categories that emerged included such factors as clarity of communication, use of instructional time, questioning techniques, provisions for individual differences, use of appropriate materials, and attitude toward reading. A similar list of behaviors was developed for content area teachers. Beginning in February, 1977, and for two succeeding years, trained observers evaluated a random sample of teachers using TCBI. Group means, used as an indicator of growth, improved from 78 to 94 for reading teachers and 44 to 59 for content teachers. Perfect ratings for each group were 130 and 100 respectively. The evaluators used the changes as support for the desirability of focusing attention on staff development; pupil achievement in reading was noted but not pursued in this report.

MITCHELL, KATHERINE A. Patterns of teacher-student responses to oral reading errors as related to teachers' theoretical frameworks. *Research in the Teaching of English*, October 1980, *14*, 243–263.

Compares the behavior and procedures of teachers who profess to use the Goodman and Gattegno theoretical frameworks. Subjects were three expert representatives of the Goodman theory and three of the Gattegno theory chosen by them. Each teacher worked with one pupil, eight or nine years old, who read about a year below grade. Two passages were read orally by the pupils; texts were long enough to provide material for about thirty minutes of instruction. The entire procedure was videotaped. A system for analyzing the protocols devised by the investigator (ASSTIR) included 43 categories, 24 related to teachers and 19 to pupils. It included stated and implied ways of working with pupils by both theories. Pupil and/or teacher behaviors were coded every three seconds or less if there was a behavior change. Protocols from two instructional sessions were used: 179 minutes for Goodman teachers and 177 minutes for Gattegno teachers. After each session an audiotaped interview with each teacher was conducted. Each videotape was analyzed by the researcher and one trained observer. Intercoder reliability was .95. Using the MACRO analysis computer program on the data revealed that the behavior of Goodman and Gattegno teachers was significantly related to their respective frameworks. Gattegno teachers used a wider variety of behaviors including four of the six associated with Goodman; Goodman teachers used none of the six behaviors associated with Gattegno. The 25 most frequent three-code patterns of interaction were identified for both groups of teachers. Results showed many similarities between the two groups of teachers in the use of these. However, there were differences which appeared related to the teachers' theoretical positions. In response to errors a significant teacher-response was found, taking different forms, but related to the respective frameworks. The study was reported to be exploratory and especially suggestive of new techniques for coding behavior and statistical analysis.

MANGIERI, JOHN N., & CORBOY, MARGARET RIEDELL. Recreational reading: do we practice what is preached? *The Reading Teacher*, May 1981, *34*, 923–925.

Surveys 571 elementary teachers in urban, suburban, and rural areas of Ohio, Pennsyvania, and South Carolina to determine the respondents' familiarity with recently published children's literature, as well as their knowledge of classroom activities to promote recreational reading. Ninety-one percent of the respondents were unable to name three children's books written in the past five years; 71% did not list even one book. When teachers were asked to name recently published children's books in each of six categories (biography, fiction, poetry, science fiction, picture books, mystery) 20% were able to name a book of fiction and a picture book. Eleven percent of the respondents were able to name at least three activities which promote recreational reading. The authors suggest that teachers are insufficiently familiar with recently published books for children.

WENDELIN, KARLA HAWKINS; ZINCK, R. ANN; & CARTER, SYLVIA M. Teachers' memories and opinions of children's books: a research update. *Language Arts*, April 1981, *58*, 416–424.

Replicates and updates a 1949 study designed to elicit titles of books that were the personal favorites of teachers, as well as to determine teachers' opinions regarding "best" and "most popular" books. The current sample included 733 preservice and inservice teachers from California, Georgia, Maine, Nebraska, and Texas. The greatest number of responses were elicited when teachers were asked for their three favorite books: 38% of the book titles appeared in both the present and the 1949 investigations. *Heidi, Little Women, Black Beauty*, and *Winnie the Pooh* remained within the top 10 favorites after 30 years. As a result of the survey item requesting the current three "best" children's books, 39% of the total vote resulted from just two books: *Charlotte's Web* and *Where the Wild Things Are*. The category of "most popular" children's books had the fewest duplications between the two studies. *Winnie the Pooh* retained popularity. Data in the current study indicated that 39% of the "best books" list was comprised of titles from the "favorites" list. What was read and enjoyed in childhood appeared to influence teachers' judgments of what should be read now. The researchers suggest that educators may need to update their information in the field of children's literature.

LUNZER, ERIC. What the school can do: instances of current practice. In Eric Lunzer & Keith Gardner (Eds.) *The effective use of reading*. London: Heinemann Educational Books, 1979, 267–298.

Reports results of visits to 15 secondary schools in England and Wales that were nominated by local education authorities as schools with a special commitment to reading instruction. Visitations were planned so that more than one school in a particular area was represented; data were collected through discussions with teachers and senior staff members as well as through observation of teaching. While uniformity within any one school was rare, the following conclusions were among those advanced: 1) Even among schools designated as committed to reading instruction, it was not unusual to find resistance to the suggestion that reading should receive more emphasis in all subjects; 2) The teaching of study skills was often postponed until the sixth year of schooling; 3) Factors influencing extensive use of reading for learning appeared to be both the degree of support rendered by headteachers or senior staff as well as teamwork by subject area specialists; and 4) Workcards and worksheets frequently supplemented oral presentations and practical experiences.

ALLINGTON, RICHARD. Teaching reading in compensatory classes: a descriptive summary. *The Reading Teacher*, November 1980, *34*, 178–183.

Summarizes the general characteristics of compensatory reading instruction in U.S. schools. The original study was conducted in 1971 by the Educational Testing Service (ETS) from a survey of principals and teachers in schools of all types from across the United States. The ETS data were reanalyzed and interpreted by a committee of IRA members. General descriptions of schools, goals, instructional time allocations, instructional organization, and of the students themselves were summarized

from a survey of over 500 schools and 1500 teachers. Included among the general characteristics were: a) increasing numbers of children experienced reading difficulties as grade level rose; b) compensatory reading programs, while viewed as supplementary, supplanted regular instruction in two out of three cases; and c) as few as one teacher in four seemed to meet the minimum standards for classroom teachers developed by IRA.

COLE, JOHN, & GARDNER, KEITH. Topic work with first-year secondary pupils. In Eric Lunzer & Keith Gardner (Eds.) *The effective use of reading*. London: Heinemann Educational Books, 1979, 167-192.

Reports observation of first-year secondary pupils and six teachers in Nottingham involved in topic-based courses which required the students to conduct independent investigations. The purpose of the observations was to describe the use of reading and allied skills during a structured, pre-planned project. Projects were intended to be the content-stimulus for the pupils' use of library and resource materials. Data collected included descriptive accounts of activities, minute-by-minute observations of the dominant activities of individuals (totalling 1,468 minutes), observations of reading materials used, taped student interviews, and other evidence of pupil response. Writing emerged as the most frequently engaged in activity (30.4% of the total time). Both copying and notetaking were interpreted as writing. Reading that occurred was for the purpose of answering questions and constituted 8.6% of the total time. A total of 130 three-minute observations of materials' usage revealed that pupils spend most of their time referring to their own notes, and less time using resource materials. Transcripts of students' interviews about aspects of the organization are included.

BOYDELL, DEANNE. The organization of junior school classrooms: a follow-up survey. *Educational Research*, November 1980, *23*, 14-19.

Reports the results of a follow-up survey of 35 English junior schools to determine change in classroom organization which had taken place in the previous seven years. The questionnaire used in the 1970 survey was only slightly modified when it was readministered in 1977 and included the three original parts: 1) matters of school policy related to classroom organization; 2) matters related to pupil location and movement; and 3) matters focused on organization of classroom activities. A comparison of both sets of data revealed that the 187 teacher respondents had made no dramatic changes in classroom organization policy over the seven years. Shifts of emphasis occurred which resulted in the total demise of streaming (homogeneous grouping). Ability grouping had decreased, and fewer teachers located their desks in dominant spatial positions. Nevertheless, children appeared to have slightly less classroom freedom, with teachers assuming tighter managerial control.

GALLO, DONALD R. Informing principals about young adult literature. *Texas Tech Journal of Education*, Winter 1980, *7*, 71-78.

Surveys 116 Connecticut secondary school principals in order to determine their beliefs about adolescent literature, their familiarity with books for young readers, and the principals' own reading habits and preferences. Analysis of the survey data showed that the majority of principals were uninformed about the reading habits of adolescents, had somewhat negative attitudes about teenagers' reading, and were not well-read in the field themselves. Over half of the principals reported they read "often," while about one-fifth read infrequently. Findings also showed that principals who read the most adolescent literature were also those who appeared most likely to acknowledge students' integrity in selecting books, and were more positive about the value of what students read. Suggestions for keeping principals informed about books for adolescents are included.

VINSONHALER, JOHN F. *The consistency of reading diagnosis.* (Research series No. 28). East Lansing, Michigan: The Institute for Research on Teaching, Michigan State University, 1979.

Explores three agreement corollaries as applied to reading diagnosis and cue collection procedure by obtaining empirical data on the agreement of reading clinicians on diagnosis and remediation. Eight clinician subjects were chosen on the basis of recommendations, training, experience, and location in the mid-Michigan area. Simulated cases presenting a range of typical reading difficulties were constructed including inventories containing cues which could be collected. Each simulated case followed a four-step procedure: (1) instruction and practice, (2) directed observational session recorded by clinical observer, (3) preparation of written diagnostic and remedial report, and (4) debriefing. Substantial specific findings on the several measures of diagnostic agreememt are reported. A major finding was that in diagnosing cases, reading clinicians did not agree very well with themselves or with other clinicians.

IRVINE, JIM. Observations on the duties and role perceptions of resource teachers in N.S.W. educational region. *Reading Education*, Autumn 1979, *4*, 19–26.

Presents data on the responses of 20 Australian resource teachers as to their training, experience, and role perception. Twelve of the teachers had more than five years' teaching experience but only four had special remedial education training and eight had only two years of training. Estimates of time allotted to various duties ranged widely. For small group tutoring, the time range estimates were from 0% to 88% with a mean of 30%; for individual tutoring, the range was 0–70% with a mean of 13.5%. Preparation of materials, consultation with teachers, and liaison duties took considerably less time. Most participants (90%) were satisfied with their job as it was but 85% rated as low or very low the existing teacher-training preparation in the teaching of reading.

HARRIS, ALBERT J. The effective teacher of reading, revisited. *The Reading Teacher*, November 1979, *33*, 135–140.

Reviews recent research to identify characteristics of good reading instruction. The article ends with nine characteristics of effective teaching as synthesized from the research findings.

II-2 Attitudes toward reading

TAYLOR, NANCY E.; PICHERT, SARAH; & CHASE, MARTHA. Views on language and reading: a comparison of the opinions of university faculty teachers and parents. *Educational Research Quarterly*, Fall 1980, *5*, 74–84.

Compares the opinions of 41 university reading faculty, 34 primary school teachers, and 128 parents about reading and language arts instruction; and also gathers the perceptions of these groups as to the importance of language for school success. A 77-item questionnaire was designed to identify and measure attitudes about the relationship between language and reading, the reading process, and reading instruction. Results indicated that these groups held different concepts of teaching and learning. Parents were more likely to perceive the importance of correctness in reading and language and the importance of teacher control during instruction. University faculty emphasized meaning and the active nature of the learner; parents saw correct oral reading as important and tended to hold a passive view of the learner. Teachers fell

between the other two groups. Agreement among groups was closer on the importance of language to school success.

GRAY, MARY JANE. Does the teacher's attitude toward reading affect the attitude toward reading held by the students? *Reading Horizons*, Summer 1981, *21*, 239–243.

Attempts to determine the influence that reading tutors' instructional practices had on the attitudes of 12 elementary grade pupils who were tutored. Undergraduates at Loyola University enrolled in their second undergraduate methods course asked children prior to six weeks of tutoring and again at the close of the semester how the child would teach a younger child to read. It was hypothesized that, as a result of a tutorial program structured to provide positive and successful experiences with reading, children's post-tutorial responses would reflect the procedures they had just experienced. Responses were compared against the format of the tutorial session; for example, after instruction three children, as compared with one at the outset, indicated they would read to a younger child if they were teaching reading. Five children, compared with three initially, said they would provide easy, interesting materials.

NGANDU, KATHLEEN M. Test your attitude toward reading research. *Journal of Reading*, January 1981, *24*, 308–310.

Presents a 20-item survey tapping attitudes about research in reading. Scoring interpretations are offered. The researcher reported a positive attitude change, as measured by this survey, for a group of 47 graduate students enrolled in two sections of a reading foundations course at the University of Nebraska.

II-3 Preservice/inservice preparation

TEACHER EDUCATION REVIEW COMMITTEE. *The preparation of teachers to teach reading and associated language skills*. Board of Teacher Education: Toowong, Queensland, Australia 1979.

Surveys beginning teachers, college lecturers, and school personnel regarding the adequacy and efficacy of training for the teaching of reading provided in colleges and universities. The study was conducted in three phases. In the first phase group interviews were conducted with 47 faculty members at 11 Queensland teaching training institutions. The second phase included group interviews with 205 supervisory teachers and 44 administrators in participating schools. Phase III involved a questionnaire mailed to 246 beginning primary teachers (returned by 215 respondents) and group interviews with 52 beginning teachers (maximum of ten per group). Highlights of the findings in Phase I included a recognition on the part of all colleges that the main objective of the pre-service program was to enable a student to begin to cope with the wide range of problems in the classroom, an objective which was only partially achieved. The majority of classroom teachers noted the need for student teachers to develop skills in preparing and presenting lessons. Both supervising teachers and administrative personnel felt that students were not getting the practical knowledge of how to actually teach reading in the classroom and that colleges emphasized the theoretical aspects of teaching reading. When the beginning teachers were asked to identify the three subjects about which they needed to know more, reading was the first choice. About 70% of beginning teachers felt that they had received too little course work in reading. Numerous additional findings are presented.

START, K. B., & STRANGE, L. Primary reading and mathematics method in eight state colleges of Victoria. *British Journal of Teacher Education*, May 1980, *6*, 131–138.

Presents a 1974 survey of eight state colleges in Victoria, Australia, in order to describe their approaches to preparing primary teachers of reading and mathematics. Data collection techniques included inspection of catalogs, course outlines, and interviews with staff. Differences were found among colleges both in the labeling and content of courses. Often, advanced methods courses were offered only as electives. There were also differences among programs in their balance between theory and practicum offerings, with a tendency for the methods courses to have an academic rather than field-based approach. The average number of compulsory hours of reading instruction over a three-year period was 44. None of the colleges achieved the minimum 100 hours of instruction recommended by the Bullock Committee in their report on literacy in England (1975).

VACCA, RICHARD T., & JOHNS, JOHN L. How preservice teachers perceive traditional and competency-based reading education. *Reading Horizons*, Fall 1980, *21*, 28–33.

Compares the knowledge acquisition and attitudes toward instruction of 12 preservice secondary education students enrolled in their first reading methods course. The course was organized into two eight-week modules: a Traditional Based Module and a Competency-Based Module. During the first half of the course, students attended two weekly 75-minute lectures and were exposed to information, techniques, and materials of reading instruction. During the second half, students tutored high school students in a field-based setting. Alternate forms of measures of knowledge acquisition and attitude were administered after each module. In addition, students kept daily logs of observations and reactions. Inspection of means and standard deviations from test scores revealed practically no difference in knowledge acquisition between the two modules. Slight differences in students' attitudes were evident favoring traditional instruction; observable differences in attitudes toward becoming teachers also favored traditional instruction. The researchers contend that traditionally-based instruction should not be discounted and that reciprocity between tradition and competency instruction should be a goal.

BRITTAIN, MARY M. Does the reading methods course make a difference? *Reading World*, May 1981, 20, 273–278.

Compares student perceptions of the relative importance of tasks in the teaching of reading as a result of enrollment in an introductory reading methods course. An inventory consisting of 68 tasks related to the teaching of reading was administered to 131 undergraduate students at the University of Wisconsin-Madison and at Virginia Commonwealth University. Students responded to the inventory at the first meeting and again during the final class meeting. They rated each item in terms of its perceived difficulty, then selected the 10 tasks they considered most important and least important in teaching reading. Chi square analyses revealed some significant changes in students' perceptions of task importance. A heightened concern for individualized assessment and instruction, skill development, and motivations for reading were evidenced. However, rank order correlation coefficients of .71 and .70 were obtained between pre-course and post-course items chosen as most important and least important, respectively, indicating stability of student opinion in addition to the changes registered in perceived significance.

BEAN, THOMAS W. Can we update experienced teachers' beliefs and practices in reading? *Reading Horizons*, Spring 1980, *20*, 183–187.

Explores the degree to which beliefs and practices about reading held by 11 graduate students (elementary and secondary reading teachers) might be affected by a course titled Psychology of Reading. A 12-point self-rating scale, developed from a

publication by Frank Smith ("Twelve Easy Ways to Make Learning to Read Difficult"), was used to gauge beliefs about reading instruction during the last class session. Data were compared with those from an earlier study of experienced teachers with no such course. Results indicated statistically significant differences in terms of the influence of the course on the degree to which experienced teachers reported agreement with psycholinguistic principles.

LEE, JOYCE W.; ASKOV, EUNICE N.; YOUNG, CARLOTTA JOYNER; & DUPUIS, MARY M. Attitude assessment for inservice programs in reading instruction. *Texas Tech Journal of Education*, Spring 1980, *7*, 151–160.

Describes development and use of instruments designed to assess teachers' attitudes toward content area reading instruction. Development of the instrument was part of a year-long project to provide intensive inservice training in reading instruction to content area teachers in three different sites (rural, urban, suburban) in Texas. Both a Likert scale and two semantic differentials were designed for the purpose of eliciting the teachers' degree of agreement with certain statements and classroom situations related to content area reading. Validation procedures for the instruments are reported. An experimental and comparison group of junior-high school teachers were administered the three attitude scales; in addition, a knowledge test and a test of morale were administered prior to and after treatment. Only the experimental group received the bimonthly inservice sessions. A site X treatment X time analysis of variance revealed tnat the experimental teachers' gains on the three attitude measures were significantly greater than the gains of comparison teachers. Teachers made significant skill gains as a result of treatment. No significant time effect was found for morale scores overall.

SMITH, RICHARD J., & EDDS, VIRGINIA C. The perceptions of reading specialists regarding their training and responsibilities. *Wisconsin State Reading Association Journal*, January 1981, *25*, 11–17.

Compares the perceptions of 244 reading professionals regarding their preservice training, the responsibilities of their position, and how best to fulfill those responsibilities. Respondents answered 10 questions, five focused upon aspects of preservice preparation, and five focused upon aspects of the position. Results showed that 78% felt that their university education prepared them adequately or very adequately for their responsibilities. Seventy-eight percent also indicated that previous teaching experience was the most important factor in the development of their skills. The areas in which the specialists felt a need for additional instruction were related to the development of the total school reading program rather than in dealing with the needs of individuals. Specialists indicated that their work with classroom teachers is most likely to result in improvement of students' reading ability, but that working with students consumed the majority of their time. Overall, specialists seem to feel more positive than negative about their roles and responsibilities.

CARVELL, ROBERT, & KERR, MICHAEL. A self-appraisal survey of reading specialists: education in the least restrictive environment. *The Journal of Educational Research*, *74*, 120–124.

Reports results of a 20-item self-appraisal survey of Kansas reading specialists designed to gather data concerning how well-prepared the specialists judged themselves in regard to mainstreaming, or "providing education in the least restrictive environment." The survey was mailed to a stratified, random sample of 100 Title I directors and 50 Title I reading teachers in the state. A return rate of 78% and 74% was achieved for each group, respectively. Items were of four general types relating to 1) the traditional role of the remedial teacher; 2) changing student characteristics as a result of mainstreaming; 3) changing educational procedures as a result of mainstreaming;

and 4) administrative and miscellaneous items. Respondents were to indicate their present level of preparation for dealing with an item and where they had received most of that preparation. Results indicated that over one-half of the Title I program directors judged themselves not adequately prepared concernig the nature of exceptional children and the preparation of an individualized education program (IEP). Results also indicated that approximately 90% of the Title I reading teachers judged themselves not adequately prepared to teach all types of handicapped children.

FARNSWORTH, BRIANT J., & GARCIA, IONE M. The effect of student teachers on achievement scores. *College Student Journal,* Fall 1980, *14*, 278–282.

Investigates the possibility that the presence of large numbers of student teachers in a regular school setting may have a negative effect on students' achievement. Scores on the Stanford Achievement Test were compared for 3000 elementary students over a three-year period in three schools serving as student teacher centers and three matched schools without student teachers. The student teacher centers had six to nine student teachers in each building during two of four school terms. Programs of instruction were considered basically the same for all six schools. Data were compared by group, grade level, and by year of data collection. It was concluded that student achievement was not effected by having student teachers involved in the instructional process.

II-4 Roles

BURG, LESLIE, & KAUFMAN, MAURICE. Laws about special education: their impact on the use of reading specialists. *The Reading Teacher,* November 1980, *34*, 187–191.

Surveys 351 Massachusetts communities to determine the impact of legislation aimed at providing diagnostic-prescriptive instruction to public school children with special needs. Central to the purpose of the study were the questions of who provides remedial reading instruction to children with special needs, the extent of the teacher's preparation for teaching reading, and the extent to which school systems viewed the delivery of remedial reading instruction to special-needs children as legally reimbursable. Thirty-seven percent of the questionnaires were returned. While a high percentage of respondents (87%) indicated that a reading specialist was involved in the evaluation process by which children are assessed for special service, and while 76% employ a reading specialist for reading instruction, 85% also used teachers certified in special education regardless of their background in reading. Responding superintendents revealed some confusion as to what services are reimbursable under law. Figures suggested that some systems avoided using reading specialists if they considered their services ineligible for reimbursement.

MANNING, GARY; MANNING, MARYANN; & MAXWELL, LINDA. Quality reading programs and the perceptions of leadership roles of elementary school principals. *Alabama Reader*, May 1981, *8*(2), 26–35.

Reports results of a survey of 166 principals in 18 states identified by State Right to Read Directors as being highly effective principals of schools having highly effective reading programs. The questionnaire survey attempted to gather data about the principals' role perceptions related to the reading program. Of the respondents, 69% were male, 31% were female. The median age was 43, median years as a principal was nine, and median years of elementary teaching was 4.5. Over 80% were in schools with under 600 students, and the majority worked in cities with populations between 5,000 and 99,000. Principals reported serving every socioeconomic group. Respondents

viewed staff development as a key element in a high quality program, and considered participation with teachers to be an important leadership role. Actual teaching of reading was not viewed as a major responsibility. In general, principals felt more money is needed for inservice programs rather than for special reading teachers, reading labs, or machines. A majority were confident in their knowledge and ability in the area of reading. Professional growth and leadership roles were perceived to be strongly influenced by individual philosophies, college courses in reading, and classroom experience.

II-5 Evaluation of programs and materials

BIBLE, THOMAS D. Utilizing innovative methodology in education: an evaluation procedure for laboratory development amenable to subsequent LEA implementation decisions. *Journal of Educational Statistics*, Summer 1979, *4*, 101–124.

Provides a method for evaluating the effectiveness of innovative school programs as a means for defining and measuring the efficacy of new programs in terms of their allocation of program resources to individual students. Although the methodology has broader applications, it has been used with basic skill programs only. The model proposes an analysis similar to that found in the field of economics. An example of the evaluation methodology is provided, applied to a compensatory reading program enrolling 224 seventh grade reading disabled pupils.

RUST, JAMES O., & FLORIDA, SUSAN D. Reading supervisors' preferences for reading programs. *Reading Improvement*, Fall 1980, *17*, 191–196.

Seeks to determine which reading materials, if any, are preferred by Reading and Title I Supervisors. Further, the investigation sought to supply information concerning the supervisors' opinions of the motivational effectiveness, academic effectiveness, and appropriateness of the materials. Ten Reading and Title I Supervisors from school systems throughout Middle and East Tennessee were asked to make a list of reading materials and programs which they had used or were presently using in their schools. A list of 22 programs was compiled and then evaluated by the supervisors using Q-sort and semantic differential techniques. Results indicated that the subjects perceived most of the programs in a relatively favorable light. A positive and significant relationship between familiarity with materials and preference for them was evident. The results also showed that several of the programs which were viewed as most effective were relatively new programs, and that data concerning their effectiveness were limited.

III. Sociology of reading

III-1 Role and use of mass media

GORDON, GEORGE N. *The communications revolution: a history of mass media in the United States*. New York: Communication Arts Books, Hastings House, 1977.

Reviews historically mass communications in the United States, including print, film, and broadcasting media. Each medium is traced from its beginning to the present time, often with special attention given to the leaders in the different periods. Emphasis was placed upon the contributions media have made to each other and to the nation, both as technology and as culture. Attention was given to contributions from abroad, especially from England and continental Europe, toward the emergence of modern media. Changes in the press and its relationship to history were described.

GRABER, DORIS A. *Mass Media and American Politics.* Washington: Congressional Quarterly Press, 1980.

Reviews and analyzes research, including the author's own unpublished studies, concerning the societal, legal, psychological, and practical effects that the media have on people's political beliefs and attitudes. Emphasis throughout the book is placed upon newspapers and television. Among the topics reviewed are media power and control, newsmaking and news reporting, press freedom and the law, media impact on individual attitudes and behavior, crises coverage, foreign affairs coverage, and trends in media policy.

ROBINSON, JOHN P. Measuring media influence/television and leisure time: a new scenario. *Journal of Communication,* Winter 1981, *31*(1), 120–130.

Compares the use of leisure time in 1975 with that in 1965. In-person interviews were conducted with 1,519 subjects in which they reported the activities they had engaged in the previous day as recorded in a time diary. Each activity was coded into one of 96 categories as was done in 1965. The largest shift in time use was in television viewing. The increase in television viewing appeared to come at the expense of the other free time activities, especially newspaper reading and visiting, as well as declines in obligatory time activities, as work and housework. Larger viewing increases were reported for those with a high school education, people over 50, blacks, and housewives.

SMITH, DAVID M. Fantasy-reality use of mass media by children: a longitudinal study. *Gazette,* 1981, *27,* 83–103.

Forms an index derived from subjects' preferences for media content, combined with their answers to open-ended questions tapping gratifications received from the media. The index was used to clarify 1,765 Australian children, ages 11–16, as fantasy- or reality-seeking subjects. In this longitudinal study, the findings indicated with increasing age a greater reliance on the media as sources of both entertainment and news, and over time a disappearance of differences between reality- and fantasy-oriented children. Changes over time for subjects at age 11–12 falling into the high fantasy category were studied.

JEFFRES, LEO W., & HUR, K. KYOON. The forgotten media consumer—the American ethnic. *Journalism Quarterly,* Spring 1980, *57,* 10–17.

Examines use of ethnic and general mass media by 13 ethnic groups in one city in the United States, relates media consumption with ethnic variables, reports evaluations of the media by the different groups, and considers the possibility of cable television for these groups. A total of 768 subjects completed questionnaires. More than one-half reported reading at least one ethnic newspaper; almost one-third had read an ethnic-language book during the past year; approximately three-fourths of the sample listened to one ethnic radio program regularly. The most popular contents of the ethnic papers were news of the local ethnic community and news from the "mother country." Metropolitan mass media use among ethnics paralleled that of the general public.

BECKER, LEE B.; WHITNEY, D. CHARLES; & COLLINS, ERIK L. Public understanding of how the news media operate. *Journalism Quarterly,* Winter 1980, *57,* 571–578, 605.

Reports the results of three telephone surveys in metropolitan Columbus, Ohio, in 1978 and 1979. Subjects (N = 616, 534, 335) answered questions on media ownership, government regulation, medium relied upon, media finances, news operations, confidence in the press, attitudes upon several issues, and determinants of knowledge of the media. Some of the questions were used in all three studies. The data revealed significant gaps in public understanding of the news business. The subjects

were more knowledgeable about the operation of television stations than about newspapers. The most knowledgeable subjects were young, male, white, and better educated. The media-use variables, except local television news viewing, were significantly related to media knowledge. Media knowledge appeared to result from exposure to the media and contact with persons working for the media.

WORCESTER, ROBERT M. Pollsters, the press, and political polling in Britain. *Public Opinion Quarterly*, Winter 1980, *44*, 548–571.

Reviews the history of political polls in Great Britain from the founding of the Gallup Poll in 1937 and examines current issues, including the relationship between the media and the polls. The results of the different polls throughout the British polling history were included. The use of telephones in election polls in 1979 was not considered useful because the telephone penetration in Britain is only 60%. Most pollsters have changed from random to quota sampling; computers have added much to the ability of pollsters to analyze data. Nearly every national and Scottish newspaper sponsors its own poll at election times. British pollsters work carefully but have little control over the actual reporting in the different media. The possible influence of polls upon voting behavior was noted.

LANG, GLADYS ENGEL, & LANG, KURT. Polling on Watergate: the battle for public opinion. *Public Opinion Quarterly*, Winter 1980, *44*, 530–547.

Analyzes through a case study of Watergate how polls have become a part of the political process through which decisions are made. Discussed were the roles of the media and of public opinion in Watergate. The strength of impeachment sentiment depended upon how the questions were phrased. The data from polls showed that the ambiguities of a question, the alternatives provided the subjects, and the context in which a question is asked made differences in the results of polls. Polls are subject to the interpretation given by the media. Only a small proportion of all releases by the polling organizations became national news. Examples of how the polls may have hastened the resignation of President Nixon are included.

PALETZ, DAVID L.; SHORT, JONATHAN Y.; BAKER, HELEN; CAMPBELL, BARBARA COOKMAN; COOPER, RICHARD J.; & OESLANDER, ROCHELLE M. Polls in the media; content, credibility, and consequences. *Public Opinion Quarterly*, Winter 1980, *44*, 495–513.

Categorizes polls appearing in the New York *Times* and on the CBS and NBC evening news programs in 1973, 1975, and 1977 and analyzes their treatment and possible political implications. The *Times* published 380 news stories using public opinion polls; NBC, 83; CBS, 40. A wider range of topics was noted for the *Times* than for television, the difference being in outlook, lifestyle, and foreign surveys. Polls were more timely but not treated more dramatically on television than in the *Times*. Examples of inadequate methodology are included. It was concluded that flawed public opinion polls given by the media are inappropriate guides for public policy.

DARDEN, DONNA K., & DARDEN, WILLIAM R. Middle-class females' media usage habits. *Journal of Black Studies*, June 1981, *11*(4), 421–434.

Explores the use of mass media by 303 white and 47 black middle class female subjects through questionnaires with all and interviews with some of the subjects. Frequency of reading magazines and time spent in televiewing and in radio listening were measured. Among the differences between the two groups are the following: Of the 38 magazines listed, significant differences appeared for nine. In the homemaking category, 7 of the 11 magazines showed no differences. White women were heavier readers than blacks of *Time* and *U.S. News and World Report*, but the

readership of *Newsweek* was more evenly divided. Five of the seven classifications of radio usage and 7 of the 15 categories were different for the two groups.

WEAVER, DAVID H. Audience need for orientation and media effects. *Communication Research*, July 1980, *7*, 361–376.

Explores whether the general cognitive motive of need for orientation (a combination of political interest and uncertainty) predicts media exposure-media effects better than individual political gratifications, especially the surveillance gratifications. Data for the study were derived from 339 personal interviews in a study conducted in 1974. Measures of gratifications and avoidances were included for television and newspapers separately along with measures of newspaper and television use for political information, party identification, interest in politics and campaigns, and frequency of discussions of politics. The findings related to reading show that correlations between newspaper use for political information and frequency of discussion are stronger than those for television. Other findings related to the purposes of the study are given.

TUCHMAN, GAYE. Introduction: the symbolic annihilation of women by the mass media. In Gaye Tuchman, Arlene Kaplan Daniels, & James Benet (Eds.) *Hearth & home: images of women in the mass media*. New York: Oxford University Press, 1978, 3–38.

Reviews research about the depiction of sex roles in mass media and the effect of that portrayal on American females. The portrayal of women on television, in women's magazines, and in newspapers reveals different amounts of stereotyping with less found in women's magazines than in the other media analyzed. In all cases, women's roles were limited. The effect of attitudes toward the portrayal of sex roles is evaluated through research about attention paid by girls to male and female characters, the value they place on the characters, and the impact of television upon attitudes towards the sex roles.

KIPPAX, SUSAN, & MURRAY, JOHN P. Using the mass media need gratification and perceived utility. *Communication Research*, July 1980, *7*, 335–360.

Examines media-related needs and the perceived helpfulness of the media in gratifying these needs and the relationship between the media-related needs and the use of the media. A total of 206 persons from the Sydney, Australia, metropolitan area rated the importance of 30 need statements, estimated the extent of their use of each of six mass media, rated their importance, and stated whether anything else was helpful in meeting these needs. Television, newspapers, and books were perceived as the most helpful media sources of need gratification, while radio, magazines, and films were perceived as less helpful. Use of the media was generally related to their perceived helpfulness but not clearly related to the expressed needs of the subjects.

TRAVIS, LEROY D., & VIOLATO, CLAUDIO. Mass media use, credulity and beliefs about youth: a survey of Canadian education students. *The Alberta Journal of Educational Research*, March 1981, *27*, 16–34.

Investigates mass media habits; perceptions of sources of information about social, political, and economic matters; and beliefs about youth of 488 (166 males, 322 females) subjects enrolled in teacher education programs at eight Canadian universities. They answered a variety of question types in a questionnaire concerning media habits and beliefs, background data, and periodicals read. From the data, it was concluded that unrealistic beliefs about youth are widespread among Canadian future teachers. These subjects perceived mass media as more reliable about social, political, economic, and other world affairs than other sources, including books and teachers, with tele-

vision being considered the most important mass media source by the largest proportion of subjects. There was some indication that relationships between beliefs about youth and some patterns of mass media usage exist.

REAGAN, JOEY, & ZENATY, JAYNE. Local news credibility: newspapers vs. TV revisited. *Journalism Quarterly*, Spring 1979, *56*, 168–172.

Conducts interviews with 213 adults to compare the importance and credibility of local news relayed by television and newspapers and to relate the credibility and importance of TV and newspapers to media use. The subjects used both the daily newspaper and a local TV station as regular sources of news. Television was perceived as a more credible, truthful, and important source of news than the newspaper. Subjects who watch less than two hours of television per day consider it to be more truthful than those who watch more than two hours per day.

WEAVER, DAVID; WILHOIT, G. CLEVELAND; & DEBOCK, HAROLD. Personal needs and media use in the Netherlands and the United States. *Gazette*, 1980, *26*, 171–194.

Compares the results of structured interviews with Indiana residents and Dutch subjects concerning their cognitive, diversion, and personal identity needs; frequency of media use to satisfy these needs; preferred medium for each need; level of satisfaction obtained from mass media in satisfying these needs; and general media use. Based upon numerous findings, it was concluded that there were a number of striking similarities: the relative salience of the different needs (keeping tab on things, relaxing), the relative frequency of media use for these needs, and specific media most often used for different needs (newspapers for keeping tab on things). For the Dutch, books were rated most satisfying for the needs to be entertained, to rest, and to avoid feeling lonely. They were rated first or second in the U.S. survey by those who used them for six of the nine needs. Other differences were noted for the two countries.

CASPI, DAN, & LIMOR, YEHIEL. How the Yom Kippur war affected Israeli legislators' media exposure. *Journalism Quarterly*, Autumn 1978, *55*, 474–480, 493.

Studies changes in usage of the mass media before and after the Yom Kippur War among legislators and the possible influence of the war upon their exposure to the public via the mass media. A series of interviews was conducted with members of the Israeli Parliament (N = 83, 101) who answered questions about their exposure to mass media and about how this exposure contributed to their knowledge of public opinion. Both major hypotheses were sustained: The legislators elected after the war had a higher degree of exposure to each of the three media. Their appreciation of the contributions made by the media to their perception of public opinion was higher in the eighth Knesset (Parliament) than in the seventh. The printed media were rated as the most effective and television the least effective in fulfilling their informational needs.

TODD, RUSTY, & BRODY, RICHARD A. Mass media and stability of party identification. Are there floating partisans? *Communication Research*, July 1980, *7*, 275–294.

Investigates whether there is a relationship between use of mass media and variations of individual political party identifications between elections. A three-step panel study covering the 1972, 1974, 1976 elections provided the data. The two dependent variables in an analysis-of-covariance design were directional stability (percentage of subjects who remained in the same political party they specified in 1972) and strength stability (percentage who retained same strength as well as party). The two independent variables were the number of media used in 1972 and the change in

the number used between 1972 and 1976. No evidence was found for the 519 subjects that higher levels of media use was related to higher stability of party direction and strength.

ZIMMER, TROY A. Media exposure to campaigns. Public anticipation and involvement in elections. *Communication Research*, April 1981, *8*, 189–204.

Determines the relationship between mass media exposure (television, radio, newspapers, magazines) and the subjects' beliefs concerning the closeness of national election races and between these beliefs and their degree of involvement in the election (their interest in the election, their influence on others to vote, and whether or not they voted). The subjects were also asked if they thought the election race would be close. The data were derived from 1,557 adults in 1968 and 2,705 in 1972 in election surveys conducted by the Center for Political Studies in a Midwestern university. Although the subjects predicted correctly that the 1968 election would be close and that the 1972 one would not be, there were no relationships between levels of media exposure and beliefs on the closeness of the election race. Expecting a close election had no relationship to interest in the campaigns as was hypothesized.

GIFFARD, C. ANTHONY. The impact of television on South African daily newspapers. *Journalism Quarterly*, Summer 1980, *57*, 216–223.

Discusses the influence of television, introduced in South Africa in 1976, on the revenue, circulation, readership, and strategies used to combat the new medium by South African newspapers. During the first year the daily papers increased their advertising revenue by 3.8%, but there was a loss for Sunday and weekly papers and magazines. Circulation rose for morning editions but dropped for afternoon ones. Black newspaper readership rose with the advent of television, but there was a steady decline within the white readership. The effect of television on newspapers has been complicated by other factors: greater competition among the papers, the economy, and random influences such as major news events.

ALPERSTEIN, GERALD. The influence of local information on daily newspaper household penetration in Canada. *(ANPA) News Research Report*, May 23, 1980, *26*, 2–5.

Studies the influence of local news and advertising on daily newspaper household penetration in 69 Canadian newspaper markets. Penetration was defined as the percentage of households in a market that receive a newspaper. The analysis also compared daily and weekly newspaper household penetration and the extent of the household's use of other media. Findings indicated that daily newspapers had their real market in the home city of the newspaper rather than the surrounding suburban areas. Weekly papers were most successful in providing local information to householders outside the home city of the daily newspaper. There appeared to be no relationship between daily newspaper household penetration and use of other media (radio, television, and magazines).

SUNOO, DON H.; TROTTER, EDGAR P.; & AAMES, RONALD L. Media use and learning of English by immigrants. *Journalism Quarterly*, Summer 1980, *57*, 330–333.

Uses data from a 1977 Indochinese refugee survey to identify the key variables associated with 563 Vietnamese's competence in speaking English. Data were collected through personal interviews with native language questionnaires. The subjects evaluated their own ability to speak English and answered questions concerning newspaper and television use, their contact with Americans, their expected standard of living in America, and their demographic background, as age, education, income, and socio-

economic status in Vietnam. Differences between the competent and deficient groups were statistically significant on all variables, with the largest margin of difference being the education variable (44%) and English language newspaper reading (42%). TV viewing showed only a relatively small margin of difference between the two groups.

MULDER, RONALD. Media credibility: a use-gratifications approach. *Journalism Quarterly*, Autumn 1980, *57*, 474-477.

Investigates the relationship between media credibility and news gratification, age, sex, and education of the subjects. A mail survey was completed by 557 subjects representing a wide distribution across demographic categories. They were asked which medium was most believable if there was a difference in news accounts and which of four reasons for reading a newspaper applied to them. The simultaneous cross-classification of the four variables produced 16 distinct classifications of subjects. A statistically significant relationship was found between perceived media credibility and all four predictors. Bivariate analysis showed that more than half of those who actively seek news find newspapers to be the most credible medium. Those tending to favor television over newspaper news were persons passively consuming news, young, males, and those with more than a grade school education. Additional findings indicated that 85% of the media credibility variance was explained by the four predictor variables; age alone explained 63% of the variance in media credibility with news gratification explaining an additional 15%.

STAUFFER, JOHN; FROST, RICHARD; & RYBOLT, WILLIAM. Recall and comprehension of radio news in Kenya. *Journalism Quarterly*, Winter 1980, *57*, 612-617.

Determines the most used and most believed medium among 392 college and high school students, out-of-school adults, and illiterates in Kenya as a part of a study concerned with the understanding of radio news. When all group ratings were averaged, the results showed that these subjects used for news, in order, radio, newspapers, magazines, television, and cinema newsreels. In case of conflicting stories, radio was the most believed followed by television, newspapers, magazines, and cinema newsreels.

MAZUR, ALLAN. Media coverage and public opinion on scientific controversies. *Journal of Communication*, Spring 1981, *31*(2), 106-115.

Reports an experiment conducted after the Three Mile Island accident in which the weekly number of television programs, column inches in the 1979 *New York Times Index*, and number of pages in three news magazines about the accident were calculated. These factors which represented the attention given by the media to Three Mile Island were compared with the results of the Harris Poll opinion surveys at closely spaced intervals. The fluctuations in public opinion throughout 1979 showed the influence of media coverage. The rise in reaction against scientific technology coincides with a rise in quantity of media coverage, suggesting that media attention tends to elicit public bias.

EDEANI, DAVID O. Critical predictors of orientation to change in a developed society. *Journalism Quarterly*, Spring 1981, *58*, 56-64.

Relates mass media exposure, especially newspaper reading, interpersonal communication, perceived importance, and a composite variable of demographic characteristics to change. The subjects were 159 adults living in a small town that was scheduled to be the home of the nation's largest coal gasification plant. They responded to a questionnaire containing forced-choice and open-ended items concerned with this change as related to fatalism, group membership, mass media exposure, interpersonal communication, perceived importance of the approaching change, and orientation to change. The results of the path analysis of the data showed that individual modernity

was predicted by interpersonal and mass communication and by the perceived importance of the change.

HICKS, RONALD G. How much news is enough? *Newspaper Research Journal*, January 1981, *2*(2), 58–67.

Concludes from a review of research that the real audience for news is less than is popularly assumed and that the political system as it operates in practice does not require a large audience for news. Research was reviewed concerning televiewing audiences and their retention of news, newspaper readership, and radio news consumption. It was argued that the individual consumer realizes the futility of being well informed politically and therefore uses news for personal needs.

BURGOON, JUDEE K.; BURGOON, MICHAEL; & TURNER, VIOLET. Evaluations of newspaper and television coverage of local, national and world news. *Newspaper Research Journal*, October 1980, *2*(1), 4–11.

Inquires of 800 adults, 18 years of age or older (49% males, 51% females), how often they read local, national, and world news in the newspaper and how satisfied they are with the amount and type of treatment given to each category. Their evaluation of one newspaper was compared to their evaluations of television coverage of the same news. In a telephone survey the subjects were asked 12 Likert-type questions, half of the subjects being asked about television and half about newspapers. The results showed that 79% read local news; 66%, people news; 64%, world and national news; and 58%, state and regional news. For local news, 65% were satisfied; for world news, 59%. Local television broadcasts were perceived as providing significantly more variety and more points of view in local, state, and national news than newspapers.

TOGGERSON, STEVE K. Media coverage and information-seeking behavior. *Journalism Quarterly*, Spring 1981, *58*, 89–93.

Determines the effects of media exposure (television, newspapers) to articles on cancer through public response telephone calls concerning specific kinds of cancer to a cancer information service. A report on thyroid cancer was given in one newspaper and on television; the second newspaper, but no television, carried a report on cervical cancer. The magnitude (number of calls), the delay in response (number of days after the coverage before there was an increase of calls), and the duration of public response concerning both kinds of cancer were determined for 10 days after media coverage; the number of calls for five days before the coverage was also tabulated. Combined media coverage had a greater effect on audience behavior than newspaper coverage alone; the response to the topics which received combined coverage is more rapid and of longer duration than to the topic in only the newspaper.

HASKINS, JACK B. The trouble with bad news. *Newspaper Research Journal*, January 1981, *2*(2), 3–16.

Reviews and analyzes research about bad news in the media and the public response to it. The major aspects of the problem which were reviewed include definitions of bad news, the prevalence and prominence of media bad news, accuracy of news portrayals, the public's perception of and interest in bad news, and the immediate and long-range effects of this news. Not much is known about the kinds of people attracted to bad news nor the motives behind their interests.

FREIMUTH, VICKI S., & VAN NEVEL, J. PAUL. Reaching the public: the asbestos awareness campaign. *Journal of Communication*, Spring 1981, *31*(2), 155–167.

Describes the ways in which the public was informed about the danger of asbestos to people's health mainly through television, radio, and newspapers. The importance of the gatekeeper (individuals who interact with large news organizations)

in each case became evident as the study included the number who agreed to publish information about the asbestos topic. A content analysis of the newspaper items revealed three topics were the most popular: hazards of asbestos exposure, negligence or cover-ups, and governmental action to inform, control, or reduce risk. Approximately 1,500 personal interviews were conducted at three times in which the subjects answered the same eight questions about their knowledge of the campaign. Overall, the campaign was considered successful in increasing the number of people who were knowledgeable about asbestos.

WATT, JR., JAMES H., & VAN DEN BERG, SJEF. How time dependency influences media effects in a community controversy. *Journalism Quarterly*, Spring 1981, *58*, 43–50.

Traces media coverage of the Concorde over one year to determine if media effects vary over a period of time. Measurement formulas were devised and used for television and print prominence of news stories related to the Concorde. The number of telephone complaints over a FAA complaint service was summarized daily; other variables were the noise levels of the Concorde in decibels, daily temperatures, and days of the week. The evidence from the results of multiple regression analyses showed that there were direct effects of media coverage during only the early stages of the study; that is, the strength-direction index showed that the more negative the coverage during this period, the higher the number of complaints the next day.

FRIEDMAN, SHARON M. Blueprint for breakdown: Three Mile Island and the media before the accident. *Journal of Communication*, Spring 1981, *31*(2), 116–128.

Examines media coverage of nuclear accidents and what the public had been told before the Three Mile Island event, how public information officials performed during the accident, and how journalists felt about accident coverage. Media coverage was analyzed for content, quality, and tone. Information was gained from Metropolitan Edison, press releases, local media performance, and interviews with public officials and journalists. The Task Force examining the coverage of Three Mile Island concluded that safety, cleanliness, and economy of nuclear power had been overemphasized by the media prior to the accident and that the local utility company and the media needed to share the blame for not keeping the public properly informed.

BYBEE, CARL R.; MCLEOD, JACK M.; LUETSCHER, WILLIAM D.; & GARRAMONE, GINA. Mass communication and voter volatility. *Public Opinion Quarterly*, Spring 1981, *45*, 69–90.

Tests the idea that the use of television for political news is related to voter volatility, the latter defined as the level of unpredictability of election outcomes from traditional demographic and political party variables. The effects of television and newspaper exposure on each of eight behavioral volatility attributes were examined before and after two control variables, education and political interest, were introduced. Hour-long personal interviews and, later, telephone interviews were conducted with 192 young voters and 161 older ones. Media use was measured by time spent with television and newspapers and by the use of various kinds of content. Neither the media exposure measures nor the control variables predicted all volatility dimensions in the same way. The principal direction of the relationship of television exposure was toward lower levels of volatility, contrary to expectations. Although newspaper reading effects were towards lower volatility, reversals were also shown.

III-2 Content analysis of printed sources

HYMAN, JOAN, & REINSTEIN, STEVEN. What the data of the seventies tell us about the role of teacher education in changing sexist attitudes in the eighties. *Action in Teacher Education*, Winter/Spring 1981, *3*(1), 85–90.

Reviews research concerned with sexism in school materials, library books, teacher preparation materials, and the extent of sexism in higher education.

TIBBETTS, SYLVIA LEE. Research in sexism: some studies of children's reading material revisited. *Educational Research Quarterly*, Winter 1979, *4*, 34–39.

Evaluates five frequently cited studies of sexism in children's reading materials which used content analysis. Four criteria were applied to each study: clear definition, standardization, mutual exclusivity, and derivation from a single classification principle. The findings showed that these studies were not based on well-structured research designs, and substantial foundations for valid conclusions appeared to be lacking. It was concluded that the loose and subjective approaches along with ill-defined, nonstandardized categories found in the studies provided no basis for scientifically valid conclusions.

SCOTT, KATHRYN P. Sexist and nonsexist materials: what impact do they have? *The Elementary School Journal*, September 1980, *81*, 47–52.

Reviews research on sexism in elementary school books in regard to the sex of the main characters, the roles depicted by each sex, and language used in reference to males and females. Also cited are researches of children's reading interests pertaining to the sex of the principal characters, the impact of reading materials on children's behavior, and their comprehension of different kinds of materials.

MCVAIGH, BETTY LEE, & JOHNSON, MARY FRANCES K. Who plays, and why, in picture books. *The Elementary School Journal*, September 1979, *80*, 25–28.

Examines 64 children's picture books on play themes, published between 1945 and 1974, to determine kinds of characters who were depicted as playing and the purposes for play. The outcomes of the stories were analyzed to determine if the purpose of play was for enjoyment, social benefits, or enhancement of self through personal success. Little boys played more and were more likely to play for fun than little girls, who were showr. in play that has a social purpose. Father figures had more effect on the purposes of play than mother figures. Nonwhite children were seldom found in the books analyzed.

HURST, JOE B. Images in children's picture books. *Social Education*, February 1981, *45*, 138–143.

Analyzes 20 Caldecott Medal winners and 20 other children's books published at the same time (1958–1978) for the extent to which picture-book characters present positive images or role models and to which sexist, ageist, and racist stereotypes are present. These books provided a bland, passive view of life. The characters made few important decisions and did not provide role models of democratic participation. The findings of the study support the hypotheses that children's books give biased messages of minorities, women, and the elderly and do not present a realistic view of American society.

SCOTT, KATHRYN P. Whatever happened to Jane and Dick? sexism in texts reexamined. *Peabody Journal of Education*, April 1981, *58*, 135–140.

Analyzes 385 stories in two recent basal reader series, grades one through six, to determine sex of and roles portrayed by the main characters. The sex of the characters was coded in 15 categories; stories were assigned to one of four groups according to the sex of the main characters. Roles were defined as traditional, nontraditional, mixed. It was concluded that sexism has been reduced in stories in two ways: 1) the proportion of female main characters has increased greatly, and 2) nontraditional roles are portrayed in substantial numbers but not so often as traditional roles. Females were more likely to be portrayed in nontraditional roles than males.

ANDERSON, ORA STERLING. Fiction for the young black reader: a critique of selected books. *The Journal of Negro Education*, Winter 1981, *50*, 75–82.

Analyzes 20 books of fiction for children and youth which portrayed blacks. These books met three criteria: gave realistic treatment of the subject and characters, provided refreshment to the spirit, and depicted black culture. In answering 13 questions, the investigator identified racial influence and positive or negative characterization in respect to authenticity, racism by omission, racial stereotyping, and negative relationships. It was concluded that very few unbiased books of fiction for black juvenile readers exist.

MOLOTCH, HARVEY L. The news of women and the work of men. In Gaye Tuchman, Arlene Kaplan Daniels, & James Benet (Eds.) *Hearth & home: images of women in the mass media.* New York: Oxford University Press, 1978, 176–185.

Analyzes newspaper stories for the presence and status of women. It was concluded that women seldom appeared in newspapers; when they do appear, it is from a man's perspective of what is interesting. Examples of the treatment of women are included in the article.

PHILLIPS, E. BARBARA. Magazines' heroines: is *Ms.* just another member of the *Family Circle*? In Gaye Tuchman, Arlene Kaplan Daniels, & James Benet (Eds.) *Hearth and home: images of women in the mass media.* New York: Oxford University Press, 1978, 116–129.

Asks what the women chosen by *Ms.* and *Family Circle* do, what their social backgrounds are, and what the attitudes of the writers are toward the heroines. From a random sample of issues of each magazine between 1974 and 1976, 120 specific women were spotlighted in eight issues of *Ms.* in contrast with 18 in 16 issues of *Family Circle.* The heroines in the latter periodical, but not in *Ms.*, are homemakers. Most of the *Ms.* heroines come from political life and public service. The business-professional women and entertainers are portrayed differently in the two periodicals. The resemblance of pre-World War I heroes to *Ms.* heroines of today was described.

FERGUSON, MARJORIE. Imagery and ideology: the cover photographs of traditional women's magazines. In Gaye Tuchman, Arlene Kaplan Daniels, & James Benet (Eds.) *Hearth & home: images of women in the mass media.* New York: Oxford University Press, 1978, 97–115.

Analyzes the cover photographs of three British women's magazines (*Women, Women's Own,* and *Women's Weekly*) through samples over 25 years (1949–1974). The significance and function of cover photographs were delineated. Facial stylizations, implied ages, and social class for the photographs were analyzed.

ENGEL, ROSALINE E. Is unequal treatment of females diminishing in children's picture books? *The Reading Teacher*, March 1981, *34*, 647–652.

Analyzes 19 Caldecott Medal and Honor books published between 1976 and 1980 to determine the number of different references to male and female characters and the image (number of times each one is mentioned) they portray. A total of 283 male and 112 female characters, including animal characters, was found. The image count resulted in 2,234 male images and 844 female images. As a part of the analysis, traditional and nontraditional patterns of language, clothing, and roles were noted. It was concluded that these areas gave evidence of an abundance of traditional stereotypes. Causes of inequality and stereotyping of sexual roles were hypothesized.

MADSEN, JANE M., & WICKERSHAM, ELAINE B. A look at young children's realistic fiction. *The Reading Teacher*, December 1980, *34*, 273–279.

Analyzes 72 children's books published between 1976 and 1978 and classified as realistic fiction (the latter defined as having a child protagonist involved in a

plausible, contemporary encounter). The books, appropriate for preschool through age 8, were analyzed for ethnic make-up of all characters; age, sex, and behavioral characteristics of the child protagonist; major themes; and traditional and nontraditional portrayal in the illustrations. This sample of books did not reflect equivalent treatment of males and females nor the culturally pluralistic make-up of United States society. An annotated bibliography including each book analyzed accompanies the report.

TAYLOR, GAIL COHEN. Images of the elderly in children's literature. *The Reading Teacher*, December 1980, *34*, 344–347.

Reviews the research related to ageism as depicted in children's picture books and basal readers, to negative stereotypes of the elderly found in these books, and to the development of positive attitudes towards aging.

VRANEY, MARY W., & BARRETT, CAROL J. Marital status: its effects on the portrayal of older characters in children's literature. *Journal of Reading*, March 1981, *24*, 487–493.

Analyzes a random sample of 131 children's and adolescent's books to determine whether characters returning to an unmarried state through widowhood are different from characters who have been unmarried all their lives. Of the books analyzed, 64 contained 80 older characters, 39 widowed and 41 never married. Chi-square tests revealed no significant relationship between marital status and the frequency of positive and negative images, the frequency of particular roles (eccentric, serving the young, and other), or the frequency of main and minor characters. There was a significant relationship between whether the characters were positive or negative and whether they were eccentric, served the young, or were cast in other roles. The older characters were represented consistently throughout the four decades.

SMALL, JR., ROBERT C. The young adult novel as a mirror of the teenage world. *Texas Tech Journal of Education*, Winter 1980, *7*, 25–37.

Compares the content of popular teenage novels of the 1950s with those written in the 1970s. The content being compared was concerned with such ideas as physical change; sexuality; drugs; social attitudes; relations with family, adults, and other teenagers; religion; the future; elements of a teenager's life; and moods of teenagers.

WILSON, ANGENE H. The image of Africa in elementary schools. *Social Education*, October 1980, *44*, 503–507.

Analyzes 10 currently used elementary reading series for African content and assesses the effects of an African content intervention strategy on elementary school students. Each series concentrated heavily on folk tales with almost all being told out of context and included very few stories about contemporary African children. Africa was represented in 35% of the books examined. Forty-six sixth-grade good-reader subjects listed five words or phrases they thought of in regard to Africa, read *A Matter of Trust*, answered questions related to the content of the book, and again wrote words which they thought pertained to Africa. The pejorative terms used by both black and white children prior to their reading of the book disappeared in the post-test.

DANILOV, A. I.; & SHARIFZHANOV, I. I. The history of the USSR according to school textbooks of the USA. *Social Education*, April 1981, *45*, 239–244.

Analyzes U.S. history textbooks for their treatment of Soviet history. All textbooks allot considerable space to the history of the USSR and, in comparison with textbooks published in the 1950s and 1960s, have made marked progress in overcoming anti-Sovietism based on fabrications and slander. They are not free, however, of political bias, oversimplification, and distortion of the truth. Examples of misinfor-

mation are noted concerning social and cultural achievements of the people, Russia's role in international politics, and the struggle of the people against foreign invaders. The author pointed out that the books do everything possible to discredit the existing political system in the Soviet Union and the role of Marxist-Leninist ideology and undercut the achievements of the first socialist state in the world. This article first appeared in Russian in a Soviet journal, *Teaching History in Schools*.

MEHLINGER, HOWARD D. The United States as portrayed in geography and history textbooks in the USSR. *Social Education*, April 1981, *45*, 234–238.

Analyzes textbooks used in the USSR for courses in the history of the USSR, world history, and geography of the continents in grades 6, 8, 9, and 10 for their treatment of the United States. The most important problem noted was that of ideological bias. In general, the textbooks devoted an appropriate number of pages to the United States; but there were important oversights, such as the importance of religion, the role of political parties, and reform movements. Other problems noted were the slanted accounts of historical events, outdated information, some important factual errors, overemphasis on minor events, and distortions. Examples of the foregoing problems are given.

YOUNG, ANNE P. Germans, history, and the Nazi past. *Social Education*, February 1981, *45*, 86–96, 98.

Reviews how the Nazi past is interpreted in West Germany in textbooks, curricula, and in scholarly work. Attitudes towards such books as the *Diary of Anne Frank* and the "Holocaust" telecast are discussed. Four developments which influenced changes in German secondary schools include the German university historians' scholarly work on the Nazi era, the training and approaches of secondary-school history teachers based upon the historians' work, the impact of reform efforts on curricula, and governmental action to help and direct education. The version of the Nazi past presented in schools contrasts sharply in East and West German schools.

CRONNEL, BRUCE, & HUMES, ANN. Elementary spelling: what's really taught. *The Elementary School Journal*, September 1980, *81*, 59–64.

Analyzes seven commonly used commercial spelling textbooks for content and ways in which the content is presented. Two indexes were prepared: the Content Index which included 29 major categories of spelling content and the Performance Mode Index which included descriptions of tasks to be performed. The coded data were keypunched for computer processing and sorted by spelling series, grade level, and major content area. Current programs are much alike in the early stages. The textbooks appear to have two conflicting bases: phonics generalizations/spelling rules and grade-level word lists. Most of the programs rarely required students to perform realistic spelling tasks.

CRONHOLM, MARGARETA, & SANDELL, ROLF. Scientific information: a review of research. *Journal of Communication*, Spring 1981, *31*(2), 85–96.

Reviews research concerning science journalists and their attitudes towards their work, the readers of scientific information, objectivity in controversial issues, and the understanding of scientific information by the public. It was suggested that education plays the determining role in both the level of interest and effect among the general public.

HIXSON, VIVIAN SCOTT. Caveat lector: reviewing popular social science. *Journal of Communication*, Spring 1981, *31*(2), 168–177.

Analyzes book reviews of four trade books on animal behavior published in 1961, 1962, and 1974 to identify misrepresentations and inaccuracies. From the earlier

books six subject areas were identified in which knowledge of evidence and conceptual clarity were required. Criteria were established for use in judging the reviews. For the 1961 and 1962 books, 15 reviewers detected problems in three or more areas while 21 found no problems. No improvement in detecting errors was found in the reviews of the 1974 books. Reviewers in specialized periodicals did a competent job, but those in daily newspapers, library journals, and literary and entertainment magazines failed to provide critical opinion.

DORRIS, JAMES M. Androgyny and pedagogy: an analysis of interpersonal communication textbooks, 1975-79. *Communication Education*, January 1981, *30*(1), 33-43.

Analyzes 22 speech communication textbooks published after 1975 for explicit implicit sex role identities being espoused as part of philosophical/theoretical positions on health. Since words and themes were used as units, the analysis was qualitative instead of quantitative. Tables of content and indices were checked for themes of "intrapersonal communication" or "self concept" or for key words relating to masculinity and feminity. A composite picture of the healthy American human being was made.

MEYER, KATHERINE; SEIDLER, JOHN; CURRY, TIMOTHY; & AVENI, ADRIAN. Women in July Fourth cartoons: a 100-year look. *Journal of Communication*, Winter 1980, *30*, 21-30.

Analyzes 576 political cartoons appearing in the July 4 editions of five newspapers during 1870-1976 to measure the frequency of women and the manner in which they were depicted. Three aspects of women were considered: dominance (how shown, alone or with men), appearance (glamorous, matronly, lifelike), and role (traditional, nontraditional, representational). Women were clearly depicted in 25% of the cartoons, with the frequency declining until the 1960s. Between 1890 and 1950 women appeared matronly; from 1950 through 1976, lifelike. Before 1940 they were shown in traditional roles. The depiction of women in the cartoons gave evidence of resistance to changing norms.

BROUSSARD, E. JOSEPH; BLACKMON, C. ROBERT; BLACKWELL, DAVID L; SMITH, DAVID W.; & HUNT, SARAH. News of aged and aging in 10 metropolitan dailies. *Journalism Quarterly*, Summer 1980, *57*, 324-327.

Tests the contention that the media reinforce and perpetuate stereotypes about aging and the aged by an examination of the contents of 10 metropolitan newspapers from eight states selected for their prominence and for variation in age levels of populations served. The 2,073 items were categorized as to types of writing, general information or special interest, and image of aging or the aged (positive, negative, neutral), page location, geographical site, and by presence or absence of a byline. The total number of pages and column inches in each issue were recorded. The investigators concluded that the length, number of items and space coverage by news concerning aging was disproportionate to the number of persons over 60 years old and that the tone of the stories was positive or neutral, not negative.

KESSLER, LAUREN. The ideas of woman suffragists and the Portland *Oregonian*. *Journalism Quarterly, Winter 1980, 57*, 597-605.

Analyzes all issues of the Portland *Oregonian* from June, 1869, to October, 1905, for news stories, feature articles, editorials, and letters to the editor concerning woman suffrage. Access to the press was achieved when three conditions were met simultaneously: 1) relative frequency of mentioning of woman suffrage rights in a two-year period; 2) all seven ideas listed by Abigail Dunniway, an early proponent of the voting issue, in her pro-suffrage newspaper, 1871-1887, being stated at least once

within a two-year period; and 3) these ideas emanating from a variety of sources outside the suffrage supporters. The three hypotheses were sustained: little access was achieved until woman suffrage was perceived as legitimate by persons outside the movement; the insiders were the major source of ideas during the 35-year period; access was found not to be a gradual process but was achieved at the time of the National American Woman Suffrage Association convention.

JARRARD, MARY W. Emerging ERA patterns in editorials in southern daily newspapers. *Journalism Quarterly*, Winter 1980, *57*, 606–611.

Analyzes the treatment of the Equal Rights Amendment to the Constitution in 61 editorials appearing in 29 southern newspapers in 12 states from January, 1970 to January, 1978. Of these editorials, 36 were classified as conservative (anti-ERA); 22, liberal (pro-ERA) and 3, neutral. Illustrations were given of each type. Examples are given of five different ways in which those categorized as conservative are similar. The number of conservative editorials increased by 1977 with 13 of the 22 editorials being so classified.

KRIEGHBAUM, HILLIER. Three Mile Island: a crash course for readers. *Mass Communication review*, Spring 1979, *6*(2), 2–10.

Presents a case history of the coverage of the Three Mile Island accident in the *New York Times*. During the first eight days the front page nuclear stories, pictures, maps, and diagrams totaled slightly more than 500 column inches. The analysis included the types of stories published on specified dates and their location in the paper. Almost every section of the paper carried a story at some time during the month investigated. It was concluded that the *Times* provided a crash course on background needed for understanding the situation.

STEPHENS, MITCHELL, & EDISON, NADYNE. Coverage of events at Three Mile Island. *Mass Communication Review*, Fall 1980, *7*(3), 3–9.

Analyzes the first week of coverage of the Three Mile Island nuclear accident in 10 news organizations: two wire services, three commercial television networks, three nationally known newspapers, and three newspapers near the accident area. Teams of graduate and undergraduate coders analyzed the presentation of 20 critical events and 42 background facts by noting their appearance in stories, the use of certain words or phrases, the source of the story, and discrepancies in wording. Generally, coverage by the media of the events was restrained and not exaggerated. Not all of the significant events of the accident were reported nor was background information necessary to understand the stories always included.

KARMEN, ANDREW. How much heat? How much light? Coverage of New York City's blackout and looting in the print media. In Charles Winick (Ed.) *Deviance and mass media*. Beverly Hills, California: Sage, 1978, *2*, 179–200.

Analyzes the contents of 45 articles in magazines, newspapers, and columns to gain a composite picture of editorial comment about the looting in New York City's blackout of 1977. Data on the looters and opinion polls on public reaction based upon analyses of social scientists were used to evaluate the content of the 45 articles found in publications having different orientations. It was concluded that most commentators made little or no attempt to understand the deviant behavior from the standpoint of the participants, but that they closely identified with the victims.

FELDMAN, HOWARD D., & ARONOFF, CRAIG E. Trends in newspaper coverage of business and economics, 1968–1978. *Newspaper Research Journal*, July 1980, *1*(4), 54–65.

Charts trends in business and economic news coverage in five metropolitan newspapers between 1968 and 1978. The number of column inches and the total number of articles concerned with business and economics and their placement within the paper were determined for 20 Sunday editions of each newspaper. The articles were classified by subject within 19 categories; six of the categories were analyzed to ascertain their trends. The coverage of business and economics increased especially between 1971 and 1975; after that period the coverage increased but at a decreasing rate. For all newspapers, there was a major increase in the coverage of energy topics and a trend to place articles of business and economic news outside the business section. The findings for each city are included in the report.

BOW, JAMES. The *Time's* financial markets column in the period around the 1929 crash. *Journalism Quarterly*, Autumn 1980, *57*, 447–450, 497.

Presents a detailed content analysis of the financial market columns appearing in the New York *Times* during the month of the stock market decline, October 13 to November 13, 1929. Thirty-three columns were analyzed and rated into three categories: optimistic, pessimistic, and neutral. Of the columns evaluated, somewhat over half (18) were rated as neutral in their analyses of financial and economic conditions. Columns with a generally optimistic tone outnumbered pessimistic ones by 9 to 6. The columns tended to present a single causal interpretation of the stock market crash. The author feels that the column writers' lack of foresight and insight suggests the need for reporters and editors experienced in economic subjects to seek out experts to aid in the interpretations of events.

POINDEXTER, PAULA M., & STROMAN, CAROLYN. The black press and the Bakke case. *Journalism Quarterly*, Summer 1980, *57*, 262–268.

Analyzes 134 stories, editorials, opinion columns, letters to the editor, and photographs concerning the Bakke reverse discrimination case found in two black weekly and two black daily newspapers at two time periods (January 1 to October 31, 1977, and immediately after the Supreme Court's decision). The items were coded according to type, placement, headline and editorial positions, and potential effects and categorized into one of seven content topics. Each item's length was recorded in column inches. The coverage by these papers was event-oriented; most, but not all, editorials took an anti-Bakke stand; letters to the editor were almost non-existent; implications of the case were seldom discussed.

CHAUDHARY, ANJU G. Press portrayal of black officials. *Journalism Quarterly*, Winter 1980, *57*, 636–641.

Analyzes 640 issues of 19 metropolitan newspapers to determine the amount of exposure and the quality of news and comment on black and white elected officials during political campaigns from 1970 through 1977. The 2,786 items about elected officials, 500 being about blacks, from six issues of each newspaper prior to the elections, were categorized according to the measures of page placement, headline size, number of words and photographs and were coded into one of six categories of bids. The average length of items about black elected officials was significantly greater than that for whites, but the display was less favorable for them. The items about the blacks tended to be slightly more negative than the items about the white officials.

GILBERG, SHELDON; EYAL, CHAIM; MCCOMBS, MAXWELL; & NICHOLAS, DAVID. The state of the union address and the press agenda. *Journalism Quarterly*, Winter 1980, *57*, 584–588.

Content analyzes two metropolitan newspapers and evening news broadcasts for the eight principal issues in President Carter's 1978 State of the Union address. To

determine if this address influenced the agendas of the national press, 4026 stories were analyzed during 28 days prior to and 28 days subsequent to the address and three days of synchronous coverage (the day prior, the day of, and the day following the address). The eight issues were rank ordered for each of the news media during the three time periods and were compared to the President's agenda through Spearman's rho. The post-speech correlations for all media were weaker than those in the period prior to the address. The findings suggested that issues emphasized in the press were reflected in the president's priorities.

SMITH, EDWARD J. The normative characteristics of the cumulative news story. *Journalism Quarterly*, Summer 1980, *57*, 292–296, 313.

Analyzes 37 randomly selected cumulative news stories comprised of 297 separate story segments in one newspaper over a 50-year period to determine informational relationships among the parts with the entire news story. Information assertions derived from the segments were recorded on continuous charts, assigned numbers to indicate the quarter of the story from which they were drawn, and categorized as being a *who*, *what*, *when*, *where*, *why*, or *how*. The total sample contained 21,466 information assertions with 75.63% being new, non-repetitive, or progressive information. The emphasis in the repetitions was on *who* with a lack of emphasis on *when*. The dominance of repetitions was in the first quarter of the story. None of the characteristics of the cumulative news story construction changed significantly over the 50-year period.

MARTIN, WILLIAM P., & SINGLETARY, MICHAEL W. Newspaper treatment of State government releases. *Journalism Quarterly*, Spring 1981, *58*, 93–96.

Investigates Pennsylvania newspapers for the treatment of news releases issued by a state agency. The 199 news releases from the first six months of 1978 were compared with resultant newspaper stories in 105 daily and 177 weekly newspapers. The articles were classified as to verbatimness, geographical locations, subject of release, and positive or negative treatment. The 4,563 mailings of the 199 news releases generated 497 (10.9%) published stories. Only 19.5% were printed verbatim; 45.4% were negative while 37.1% were positive, and 17.5% were both positive and negative. Non-dailies were less likely than dailies to use news releases.

SODERLUND, WALTER C.; WAGENBERG, RONALD H.; BRIGGS, E. DONALD; & NELSON, RALPH C. Output and feedback: Canadian newspapers and political integration. *Journalism Quarterly*, Summer 1980, *57*, 316–321.

Reviews front page content, editorials, and letters to the editor in 60 issues of each of 21 Canadian newspapers published in 1976 for eight selected themes related to political integration. The newspapers representing all provinces and including both English and French language ones from Quebec were grouped according to the four major regions of the country. The number of items on each theme appearing on the front page and letters to the editor were counted; editorials were counted and coded as "integrative," "neutral," or "divisive." The treatment of integration issues by the press varied from region to region and had greatest variation in Quebec. Although the output-feedback loop was confirmed by the data relating the numbers of letters to the editors to front page coverage of the issues, there were issues where the public became exercised beyond the stimulus provided by the press. The tone of the editorials appeared optimistic.

VANSICKLE, RONALD L. Implicit operational definitions of economic news literacy in the printed news media. *Social Education*, January 1981, *45*, 68–73.

Identifies economic concepts used in economic news and opinion pages in three metropolitan newspapers and two news magazines. Each magazine was analyzed

every other week on an alternating basis; each newspaper was obtained three times per week for one month. Economic vocabulary words were listed; the type of each article was identified; and the frequency of word use was recorded. After similar terms were combined, 328 economic words remained with frequencies ranging from one time to 940 times. These words were categorized according to their frequency of use as being infrequent, moderate, or frequent. Comparisons were made of each category in newspapers and magazines through the use of a frequency formula and of the terms with the conceptual framework for teaching economics sponsored by the Joint Countil on Economic Education.

SOLIMINE, MICHAEL E. Newsmagazine coverage of the Supreme Court. *Journalism Quarterly*, Winter 1980, *57*, 661–663.

Measures the quantity and quality of coverage of the United States Supreme Court decisions for three terms in three news magazines. Each decision was classified as concerning either the First Amendment, Equal Protection issues, or all others. For quality of reporting, each decision was coded on a six-variable index. The magazines reported approximately 15% of the Court's decisions and 20% of references to pending cases or cases denied. Most decisions were found in the law sections of the magazines, but some were placed in the national news section. The quality of the reporting was rated as relatively high.

STONE, GERALD C., & MCCOMBS, MAXWELL E. Tracing the time lag in agenda-setting. *Journalism Quarterly*, Spring 1981, *58*, 51–55.

Questions what time period is required before a media topic or issue receives public recognition. The data from two earlier studies concerning public agenda issues were matched by the media agenda obtained through a content analysis of two national news magazines. Coders counted the number of stories included on each public interest topic and the total number of column inches devoted to the stories. Interval scales were established for the number of subjects who mentioned topics as being important and the column inches on these topics in the two magazines for the time frames surrounding three survey periods. The two data sets suggest an approximate two-to-six months' period for the translation of mass media agenda to the public agenda.

SMITH, EDWARD. Journalism education issues covered in two publications. *Journalism Quarterly*, Autumn 1980, *57*, 491–495.

Examines issues of two journals (*Journalism Quarterly*, 1924–1973, and *Journalism Educator*, 1971–1978) for journalism education subjects. The 386 articles were assigned to one of 12 content categories and measured. The types of articles (quantitative, qualitative) and types of authors (educator, non-educator) were determined. A trend was noted in the *Quarterly* from the use of qualitative to quantitative approaches; articles in the *Educator* remained qualitative. The most frequently occurring content categories were "courses" for the *Quarterly*, and "teaching" for the *Educator*. In both journals the overwhelming majority of the articles analyzed were written by educators.

GELLES, RICHARD J. *Teaching Sociology* on teaching sociology. *Teaching Sociology*, October 1980, *8*, 3–20.

Reviews and analyzes the content of *Teaching Sociology* for the first seven years of its publication, beginning in 1973. The majority of the articles were classified in two categories: (1) innovative teaching strategies and the evaluation of the innovations and (2) specific techniques to teach ideas and concepts. Methods of conducting research and limitations of sociology research are delineated. Most endeavors to improve the teaching of sociology have failed to apply sociological theory to the teaching.

MADDOX, WILLIAM S. & ROBINS, ROBERT. How *People* magazine covers political figures. *Journalism Quarterly, Spring 1981, 58,* 113–115.

Examines the extent and nature of coverage given to political figures in 12 randomly selected issues of *People* during 1978. The references were categorized according to name only, personal biography, political role, social activities, or people puzzle (name appearing in puzzle at end of each issue). Whether or not each story was mainly about politicians was noted. Of the 172 articles analyzed, 71 (26 percent) included a reference to a political figure; only 12 of the articles had a political subject as the primary theme. The political figures mentioned were primarily celebrities, devoid of political role, partisanship, or definition of who they are.

VINCENT, RICHARD C. The evolution of television criticism in the New York *Times*: 1949–1977. *Journalism Quarterly,* Winter 1980, *57,* 647–651, 676.

Analyzes trends in television criticism found in the New York *Times* between 1949 and 1977. Articles from the first four Sunday editions of February and October every fourth year were coded by subject and criteria used in critical reviews of specific programs. A significant portion of the articles was devoted to personality features. The reviews relied upon critical criteria belonging to the domain of legitimate theater criticism. The reviews discussed such basic elements as performance and plot but neglected characteristics intrinsic to the electronic medium, such as editing, sound, and image quality. Trends remained fairly constant over the years surveyed.

SMITH, NICK L., & CAULLEY, DARREL N. The evaluation of educational journals through the study of citations. *Educational Researcher,* May 1981, *10*(5), 11–12, 22–24.

Investigates which articles published in three research journals during 1972 and 1973 are most cited, the sources citing these articles, and the citation characteristics of these articles. The data base was the *Social Science Citation Index,* which indexes significant social science articles from numerous journals. A relative impact factor was computed to provide an average citation rate per published article for each journal. The top 10% most cited articles in each journal (total = 22) were examined to determine in which journals the citations appeared. The most influential articles were cited almost exclusively in education journals. There appears to be no discernible pattern with respect to the time of citation and the time that the article was published.

NNAEMEKA, TONY, & RICHSTAD, JIM. Structured relations and foreign news flow in the Pacific region. *Gazette,* 1980, *26,* 235–257.

Codes 2,552 international news items from 90 issues of 19 daily and weekly newspapers in the Pacific region and the United States. The purpose of the analysis was to determine the effect of colonial ties or structured pattern of external relations on news flow and the impact of external relations upon news flow imbalance between developed and developing countries and within the developing countries. It was found that news and editorial attention to different newsmaking countries, except the French Pacific papers, varied according to colonial-structured political groupings in the region. Periphery news media reported more about the colonial center than the center reported about the island states. Newspapers within each structural relational group paid more attention to events in the periphery of their groups than that of contrasting groups.

TADAYON, MOHAMAD. The image of Iran in *The New York Times. Gazette,* 1980, *26,* 217–233.

Analyzes *The New York Times* for the treatment and coverage of Iran in the 1971–76 period. The purposes of this analysis were to learn if information could be gained about the probability of a political upheaval in Iran in the following years and

the effect that the oil crises had on the coverage of Iran. Rotated random sampling of 509 Iran-related items yielded a sample of 99 stories which were content analyzed under four major categories, each having sub-categories: foreign relations (27 categories), internal affairs (24 categories), society and culture (12 categories) and prominent individuals (9 categories). In terms of total frequency of mention, the Shah and the U.S. arms sales to Iran were the two top categories.

YATES, NORRIS. The vocabulary of *Time* magazine revisited. *American Speech*, Spring 1981, *56*(1), 53–63.

Explores the vocabulary used in *Time* magazine and compares the results with an earlier similar study. Certain words were found to be trite because of long overuse in the magazine. New words appeared through analogy, puns, blends, and unusual use of affixes. The same modifiers have been used to describe widely diverse people. Words with an old-fashioned or provincial tone were combined with modern ones. Many examples were given of the foregoing findings. Also included is a list of words either coined or popularized by *Time*.

HART, RODERICK P.; TURNER, KATHLEEN J.; & KNUPP, RALPH E. A rhetorical profile of religious news: *Time*, 1947–1976. *Journal of Communication*, Summer 1981, *31*(3), 58–68.

Investigates how *Time* magazine during a 30-year period treats religious news in 648 articles. Each article was measured in column centimeters and in number of paragraphs and was coded in the following areas: denominational focus, topical focus, conflict orientation, presentational focus, role orientation, and sex orientation. Among the many findings are the following: religion is portrayed as more concerned with institutional matters than pastoral; religious activity takes place more in the East than in any other place; four of every five articles were primarily concerned with conflict. No significant differences were found in the amount of space-per-article devoted to the denominations, and no religion received feature status significantly more often than any other. When actual numbers of members in each denomination are considered, over-representation was given to Catholics, Jews, and Presbyterians while Methodists, Lutherans, and Baptists are under-represented.

WEAVER, DAVID H.; & WILHOIT, G. CLEVELAND. Foreign news coverage in two U.S. wire services. *Journal of Communication*, Spring 1981, *31*(2), 55–63.

Determines the amount and quality of news about the more- and the less-developed countries available to most small- and medium-sized mass media in the United States. Two types of samples from Associated Press and United Press International were analyzed: two weeks of consecutive days and two constructed weeks. Stories were categorized according to topics and themes as well as the nationality and position of the principal persons within the news stories. Most of the 66 less-developed countries and the 25 more-developed countries received some coverage. Both press services carried significantly more and longer foreign news stories from the less- than from the more-developed countries. For both types of countries, the bulk of the coverage was about diplomatic and political activity, internal or armed conflict, peace moves, elections, crime, and human interest.

SHEPHERD, R. GORDON. Selectivity of sources: reporting the marijuana controversy. *Journal of Communication*, Spring 1981, *31*(2), 129–137.

Investigates which scientific sources on marijuana have the most citations and the scientific credibility of these sources among marijuana research investigators. Citation data for specific studies and for individual scientists was made possible through *Science Citation Index*. A review of the scientific literature on marijuana was

done for 245 science journal articles and for 196 authors during 1967–1972. The most frequently cited study had a yearly mean of 31.6 citations, while the average number for all studies was 3.4. A survey of science news articles on marijuana was conducted in three large metropolitan newspapers and 26 magazines. Of the 275 articles surveyed, 59 cited the results of 20 research publications. More than two-thirds (69%) of the writers had no citation to any work on marijuana published in science journals.

ONU, P. EZE. The use and misuse of scarce newsprint: mortuary advertisements compete for space in African daily newspapers. *Gazette*, 1981, *27*, 105–121.

Analyzes the proportional distribution of space to various genres of content in two black African newspapers during one week in 1978. A review of the perception of the daily press as a mirror of life and of the problem of scarcity of newsprint in Africa was given. The results of a quantitative measurement of column centimeter space showed a preference for local over foreign news; urban over rural; developed countries over developing areas; Western bloc nations over Eastern; and sports, crime, and amusement news instead of more serious news. A major finding was the high visibility of mortuary advertisements and public expressions of bereavement which compete with other classifications of news for the limited space available in African newspapers.

NNAEMEKA, TONY, & RICHSTAD, JIM. Internal controls and foreign news coverage. Pacific press systems. *Communication Research*, January 1981, *8*, 97–135.

Studies the extramedia and intramedia variables in foreign news coverage in national press systems. The purposes of the exploratory study were to determine dimensions of similarities and differences in internal social conditions of operation of a variety of national press systems and to explore possible linkages between the extracted dimensions and patterns of foreign news coverage and editorial emphasis. The press sample consisted of 27 daily and weekly newspapers from 25 countries of the Pacific Basin (e.g., U.S., Japan, China, Australia). Coders identified 105 district news events in the 4200 foreign news stories in 124 issues of the 27 papers. Newspapers tended to print more stories and editorial about foreign news from countries of economic development similar to their own state's. Contrary to previous studies, this study found that the financial organization of individual newspapers was correlated to foreign news reporting. Several other extramedia and intramedia variables affecting foreign news coverage are reported and discussed. It was concluded that the method of analyzing intramedia and extramedia variables was valid.

III-3 Readibility and legibility

WRIGHT, PATRICIA. Strategy and tactics in the design of forms. *Visible Language*, 1980, *14*, 151–193.

Reviews research which relates the designs of various kinds of forms to the difficulties people have in completing them. A distinction is made between issues applicable to many kinds of forms and those which are specific to particular kinds of forms. Included in the review are the functions of forms, cost effectiveness of good design, research strategies, overall structure, various classes of questions. It was concluded that those who seek simple recipes for designing adequate forms have failed to understand the complexities of the problem.

III-4 Reading interests, preferences, habits

ADONI, HANNA & SHADMI, ERELLA. The portrait of the citizen as a young reader: the functions of books in the political socialization of youth in Israel. *Reading Research Quarterly*, 1980, *16*, 121–137.

Examines the helpfulness of books in the development of civic and national values about Israeli society and the Jewish nation. A total of 841 fifteen- and seventeen-year-old Israeli subjects responded to a questionnaire which included questions about the degree of importance attached to certain cognitive and affective political values, the perceived helpfulness of books in developing these values, the number of books read in the past three months, the title of one book which impressed the subject, and background variables. A multi-dimensional analysis of the most impressive books and the subjects' evaluations of books as socializing agents in the development of national and civic values were combined. The majority of the most impressive books were fiction and dealt with universal themes. Books were perceived as helpful in developing national values but less helpful in developing civic ones. The degree of importance attached to both civic and national cognitive values correlated positively with non-fiction books and with dominance of politically oriented content elements.

SPARKES, VERNONE M., & WINTER, JAMES P. Public interest in foreign news. *Gazette*, 1980, *26*, 149–170.

Pilots a field experiment in audience reaction to and interest in foreign news. Subjects from 201 households in interviews ranked fictitious accounts concerning six topics as applied to four countries. With either a pure factorial or repeated measure design, cells were treated as independent. Even though the frequency of newspaper use was higher for the entire sample than that for television, the latter emerged as the more important medium for foreign news. The majority desired less news of violence and more about people. The subjects were also asked to recall news and to complete an attitude scale concerning foreign affairs. Attitudes did not correlate with either media or recall of foreign news.

ABRAMS, MARK. Time and the elderly. *New Society*, December 21/28, 1978, *46*, 685–686.

Surveys 1,650 men and women age 65 and above to ascertain how the older British spend their time. Among the activities reported were radio listening (averaging 1½ hours), reading (1½ hours), resting (2 hours), and televiewing (3 hours). Many individual differences were found, especially among the different social classes and among the former occupations and professions.

MURRAY, MARTHA S. Older adults and reading, the effect of residential lifestyles. *Lifelong Learning: The Adult Years*, January 1981, *4*, 17, 31.

Surveys through structured interviews older adults living in nursing homes and those living in an apartment complex to identify their reading needs and preferences and residential lifestyles. Both groups read and considered reading important. The institutionalized adults' limited access to reading influenced their reading; these adults were unaware of available library services. Noninstitutionalized older adults tended to read to gain knowledge, but institutionalized ones read primarily to pass time. The reading of both groups was limited because of vision problems, the unavailability of large print reading materials, and the preference for other activities.

STAIGER, RALPH C. Encouraging the reading habit. In Dorothy S. Strickland (Ed.) *The Role of Literature in Reading Instruction: Cross-Cultural Views*. Newark, Delaware: International Reading Association, 1981, 33–42.

Reviews research and documents concerning the purposes for which adults read and ways in which to stimulate the reading of the general public. Projects in New Zealand, Australia, and Japan are described.

WOLF, RONALD E. What is reading good for? Perspectives from senior citizens. In Laura S. Johnson (Ed.) *Reading and the Adult Learner*. Newark, Delaware: International Reading Association, 1980, 13–15.

Investigates the leisure time reading behaviors of 249 elderly residents of retirement homes in Michigan. Each resident completed an 18-item questionnaire designed to determine if purposes for reading have a lifespan perspective and fulfill specific needs within individuals. Specifically, elderly respondents indicated that reading did fulfill specific needs within individuals. Specifically, elderly respondents indicated that reading did fulfill lifelong needs. Second, reading provided many elderly persons with a coping mechanism pertinent to the problems of aging. Persons interested in reading indicated that they also participated in more social activities.

JACKSON, KENNETH, M. Broadening of reader interests seen through economic news' relation to households. *Newspaper Research Journal*, October 1980, *2*(1), 33–42.

Shows that newspaper subscribers have broader and more varied interests in economic news than personal surveys indicate. As part of a larger study, a commercial polling firm conducted telephone interviews with 300 subjects who were treated as representatives of a household rather than as individuals. The subjects answered questions about their life styles, the impact that economic affairs could have on their households, and frequency and kinds of economic news they preferred.

MILLER, JON D., & BARRINGTON, THOMAS M. The acquisition and retention of scientific information. *Journal of Communication*, Spring 1981, *31*(2), 178–189.

Uses data from a 1979 survey of attitudes of the United States public towards science and technology and forms a path model to predict science policy knowledge. Approximately half of the adult population expressed interest in scientific issues but only one-fourth were knowledgeable about them, the discrepancy being influenced by education and socialization. Through path analysis it was found that sex (male), a college education, some college science courses, and occupational experience with science predicted high interest in science and high science acquisition.

SUBBER, RICHARD C., & SCHWEITZER, JOHN C. What to drop and what to keep: a do-it-yourself approach. *Newspaper Research Journal*, July 1980, *1*(4), 38–45.

Determines which comics to retain in a newspaper through an in-paper poll (268 subjects) and a random survey of subscribers (268 responses from 117 households). The subjects completed a questionnaire concerning their readership of and preferences for 20 comic strips and panels appearing on the comic page of one newspaper. The two studies produced substantially similar results with respect to the comics most read and best- and least-liked. Almost six out of 10 read fewer than half of the comics on the page, and three out of 10 read no more than five comics. The results showed different reader preferences according to the age and sex of the subjects. The comics dropped and the reasons for dropping them were included in the report.

RIBOVICH, JERILYN K., & ERICKSON, LAWRENCE. A study of lifelong reading with implications for instructional programs. *Journal of Reading*, October 1980, *24*, 20–26.

Interviews 30 adults over age 60 about their reading habits, attitudes, and interests. The mean CA was 74.5; 12 had done some college work or had completed college and five had done graduate work. Twenty-one were classified as having a nonprofessional occupation prior to retirement. As an information source, television was reported most frequently (57%), followed by newspapers (20%) and magazines (13%). On a 5-point scale, of attitude toward reading, reading had a mean of 4.2. The amount of reading done ranked at 3.7 on a 5-point scale. Thirteen individuals said that

they wished they read more. When asked to rate whether reading would be at the top, middle, or bottom of a list of free-time activities, 37% said at the top and 57% said at the middle. A total of 80% said that they read books with 30% indicating that they were currently reading one. When asked to select from among six categories of books the types read frequently, 47% indicated autobiography/biography; 43%, world events; 33%, mysteries; 33%, travel; 30%, romance; and 23%, religion. Magazines were read by 97% of the interviewees. All reported reading newspapers. The group mean for reported amount of reading in their middle years was 3.5 and in childhood, 3.8.

III-5 Readership

BOGART, LEO. Press and Public: *Who Reads What, Where, When, and Why in American Newspapers.* Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1981.

Reviews research done primarily since 1960 concerning challenges that face newspapers, newspaper reading habits of people with different backgrounds, the place of newspapers in the lives of Americans, the content of newspapers, and the complexities of the newspaper business. Most of the studies reported in the book were surveys made under Bogart's direction at the Newspaper Advertising Bureau. Some of the many topics reviewed are changes in circulation, social trends and newspaper readership, the extent of newspaper reading, the evolution of reading habits, the relationship of newspapers to television, interests of readers, and marketing the newspaper.

STAMM, KEITH R., & JACOUBOVITCH, M. DANIEL. How much do they read in the daily newspaper: a measurement study. *Journalism Quarterly,* Summer 1980, *57,* 234–242.

Shows that the association between content and readership varies according to the measurement unit and frame within which reading behavior is counted. The units included headlines, text, photographs, cutlines, cartoons and comics, and tables. Two frames were distinguished: spatial (issue, section, page, news hole) and temporal (how reader uses time). The 110 subjects recorded the times they started and completed their reading, indicated interruptions, used a pen of a different color for each reading episode, and marked all units read in two newspapers during a two-week period. Readership behavior varied widely depending on which unit was being considered. They read more headlines than text, more photos than cutlines, and scarcely any tables. Readership varied from place to place and time to time and with content categories regardless of the measurement frame or unit employed.

GUTHRIE, JOHN T. Acquisition of newspaper readership. *The Reading Teacher,* February 1981, *34,* 616–618.

Comments upon a study sponsored by the Newspaper Advertising Bureay in which a nationwide sample of 1,156 children, ages 6 to 17 years, with their mothers were personally interviewed. A total of 817 households was represented. Newspaper reading increased as children matured; the content of the paper reported to be read most often by children changed with age; the acquisition patterns of boys differed from those of girls. There was little evidence to support a modeling hypothesis, as girls differed from their mothers on parts of the newspaper read. Information about the fathers' reading was not available. The effect of reading a newspaper in school, the importance of availability, and the influence of teachers on the newspaper reading of children were noted.

McCombs, Maxwell E., & Einsiedel, Edna F. Explaining newspaper readership: motives, attitudes and content. *Mass Communication Review*, Fall 1980, *7*(3), 13–16.

Reviews research concerning the relationship between newspaper readership and the motivations, attitudes, and content perferences of readers. From the research which was cited, all three variables explain reasons that a person reads newspapers.

Becker, Lee B.; Collins, Erik L.; & Fruit, Jeffrey W. Personal motivations and newspaper readership. *(ANPA) News Research Report*, May 23, 1980, *26*, 6–9.

Assessed the motivation to read of 596 adult household heads in Ohio interviewed by telephone in order to determine newspaper reader and non-reader trends. Persons who did not read a newspaper at least once a week represented 24% of the sample. Motivations were determined by asking respondents to rate the relative importance to them of 13 different statements (e.g., to keep up with local events, to see and hear interesting things). Findings indicated that motivations (needs) predicted newspaper reading, that readers were more motivated than nonreaders to keep up with their community and nation, while nonreaders were more highly motivated to seek entertainment than to keep informed. Readers were about equally motivated to seek information and entertainment. Readers were also asked how much of the newspaper and which of four story types they typically read. In general, motivations were better readership predictors for stories about government than for stories about ordinary people, accidents or crime.

Lehnert, Eileen. The youth market's ideal newspaper. *Newspaper Research Journal*, April 1981, *2*(3), 3–15.

Uses the Q-technique to segment the 18- to 34-year-old reader market to determine attitudes toward the press. The 71 college students sorted 62 attitude statements in reference to their ideal newspaper in a quasi-normal distribution along an agree-disagree continuum. The statements originated from in-depth interviews with 14 subjects who gave a wide range of opinions about newspapers. Five factors emerged, each factor representing a specific type of reader. The factors were named Information Stalker, Consumer Advocates, Fascinated Feature Reader, Opinion Seekers, and Pillars of the Community. The study showed that 18- to 34-year-old readers do not have a single set of consumer needs and that the subjects, as a whole, were dissatisfied with their newspapers, with each group wishing to see different changes made.

Wade, Serena E. College students' use of newspapers for political commentary. *ANPA News Research Report*, March 1981, No. 30, 6–8.

Surveys media habits, especially newspaper reading, for gaining political information of 376 students in two California universities. The subjects answered lengthy questionnaires in each of their four years in college, 1973–1977. Newspapers were preferred by 20% of the students for political commentary for at least one college year. Those who were more likely to select newspapers were from families with higher incomes and were members of traditional political parties. They were more conservative and more politically active than students selecting other media for political commentary. Among all subjects, magazines were a two-to-one favorite for political interpretations.

Buehler, Charles J., & McLaughlin, Marilou B. Reading expectation survey. *Peabody Journal of Education*, July 1980, *57*, 256–267.

Compares the titles of books read by 250 college freshman students in the past with those randomly selected faculty members from 23 academic departments

thought students had read or should have read. The students indicated which of the 67 titles they had read. It was concluded that there was little correlation between what the faculty thought students should have read and students' past free-choice reading behavior, that students had read parts of many books on the faculty list but had poor general understanding of these books, and that the visual media influence student reading.

BURGOON, JUDEE K., & BURGOON, MICHAEL. Predictors of newspaper readership. *Journalism Quarterly*, Winter 1980, *57*, 589–596.

Considers 17 factors as potential predictors of newspaper readership and examines the relative importance of each. The 4020 subjects who lived in four different regions in the United States, were interviewed by telephone concerning their newspaper reading, time spent reading newspapers, reasons for not reading newspapers, and attitudes towards their communities and newspapers. They also gave demographic information. Multiple regression analysis for each individual newspaper identified the best of predictors of frequency of readership. Although the correlates of readership differed among the four newspapers, certain factors were common to two or more papers. The most consistent predictor was satisfaction with the paper. Income, age, number of adults in households, and editorial and production elements were other predictors of readership. The variance in newspaper readership accounted for by all of the variables taken together was not large.

SCHWARTZ, STUART H. A general psychographic analysis of newspaper use and life style. *Journalism Quarterly*, Autumn 1980, *57*, 392–401, 431.

Relates life style of 349 adults from two suburban midwestern communities to their newspaper reading habits. The subjects completed a five-point Likert-type scale which contained 57 life style and media use items. From a factor analysis, three patterns of reading were identified: serious, sports, and culture-leisure factors. Every *n*th subject was assigned to one of eight groups. Data from each of the groups were Q-factor analyzed and generated a total of 35 factors. These in turn were clustered into four types of market segments representing the following life styles: young optimists, traditional conservatives, progressive conservatives, and grim independents. Significant differences appeared among the groups on newspaper use variables, but for all four groups newspaper reading was relegated to a minor status.

SOBAL, JEFF, & JACKSON-BEECK, MARILYN. Newspaper nonreaders: a national profile. *Journalism Quarterly*, Spring 1981, *58*, 9–13, 28.

Compares newspaper nonreaders with readers on various demographic characteristics. The subjects were 6165 adults, 18 years old or older, who were interviewed in four surveys by the National Opinion Research Center; of these, 285 (4.6 per cent) were nonreaders of newspapers. Subjects were classified as readers if they read a newspaper at least once per week. Nationwide, nonreaders tend to be poorly educated, elderly, socially disadvantaged; they tend to be socially isolated, adrift in the socio-economic system, liberal and Democrats but not very much involved in the political progress, and live in rural communities. Because of considerable diversity among the subjects, four types of newspaper nonreaders were identified.

TILLINGHAST, WILLIAM A. Declining newspaper readership: impact of region and urbanization. *Journalism Quarterly*, Spring 1981, *58*, 14–23, 50.

Compares four readership studies and circulation trend data to examine the patterns of declining newspaper penetration and to determine if geographic location is related to differences in newspaper circulation. Comparisons of disparate results in the foregoing studies suggested that more than the passing of time is needed to explain

increasing nonreadership of newspapers, especially since such factors as age, sex, and education of the readers vary in proportion but not in relation to exposure. The investigator noted that newspaper penetration is declining nationally over time, even as the West and Midwest shift to morning circulation; increases with increased urbanization; and varies significantly by region of the country. The Midwest's higher penetration levels differed significantly from both those of the South and the West, while the East differed significantly only from the South.

LYNN, JERRY R., & BENNETT, ELLEN M. Newspaper readership patterns in non-metropolitan communities. *Newspaper Research Journal*, July 1980, *1*(4), 18–24.

Examines the relationship between community setting and readership of specific newspaper content, especially local and non-local news, in a statewide (Tennessee) non-metropolitan study. Completed telephone interviews were obtained from 1,487 subjects by professional interviewers. The cross-tabulations of community type and specific readership showed that it was difficult to distinguish between rural and farm readers, that readers in towns and cities were more likely to report regular readership of specific content, and that the items distinguishing readership between rural-farm and town-city subjects are national news, society news, local government news, letters to the editor, and state news. Significant discriminating variables resulting from a stepwise discriminant analysis for community types were national, society, state, and local government news. It was concluded that readers in small non-metropolitan communities have a strong orientation to their newspaper.

JOHNSON, J. DAVID, & TIMS, ALBERT R. Magazine evaluations and levels of readership: a cross-national comparison. *Journalism Quarterly*, Spring 1981, *58*, 96–98.

Investigates the relationship between readers' perceptions of a publication and readership and questions if some attributes are more important than others. Subjects in three developing countries (Venezuela, 334; Philippines, 212; Nigeria, 152 and 149) evaluated three magazines published by the U. S. International Communication Agency by means of 11 evaluative scales of the bipolar adjective type. A discriminant analysis using the 11 scales as the discriminating variables and level of readership (either occasional or regular) as the taxonomic variable was carried out. A large number of the attributes did not discriminate between regular and occasional readers. Three of the attributes (impartiality, accuracy, and visual attractiveness) contributed to functions discriminating between the two types of readers.

III-6 Role, development, and use of libraries

HORROCKS, NORMAN. Encyclopedias and public libraries: a Canadian survey. *Canadian Library Journal*, April 1981, *38*(2), 79–83.

Questions librarians from 57 Canadian libraries on the use and effectiveness of general English language encyclopedias in print. The most experienced general reference librarians were asked to complete the 10 questions with the help of young adult children's specialists for questions involving encyclopedias for young people. Of the 34 encyclopedias listed, there was widespread support for the quality of *World Book*, lack of enthusiasm for the new *Britannica*, and little said in favor of one-volume encyclopedias. When asked if teachers in the community restricted or discouraged student use of general encyclopedias, the responses were almost equally divided. Comments of the librarians were included for each question.

DEGRUYTER, LISA. The history and development of rural public libraries. *Library Trends*, Spring 1980, *28*, 513–523.

Traces the history of rural public library service in the United States and delineates how interrelated obstacles were overcome. Five periods of rural library development were identified; all attempted to overcome a rural urban split and to equalize services for the rural populations. The five periods included the library extension period in the 1890s, county libraries in the World War I years, regional libraries in the 1930s and 1940s, the Library Service Act in the 1940s, and the Library Services and Construction Act of 1964. Transportation difficulties were overcome by traveling libraries; low population density was dealt with by increasingly larger units of service; lack of local funds in rural areas was alleviated in part by state and federal funding. Rural library service has been extending coverage and improving in quality of service since the nineteenth century.

WEECH, TERRY L. Public library standards and rural library service. *Library Trends, Spring 1980, 28*, 599–617.

Details public library standards on national and state levels and relates these to rural libraries. Since most of the emphasis at the national and state levels has been placed on large units of library service, little attention has been given to rural library concerns. In 1976, 13% of the population of the United States had adequate library service; 4%, no service; 83% inadequate service when measured against the standards adopted by each state. Rural libraries find themselves in a vicious circle of needing more money to provide adequate services but having fewer resources for obtaining money. As a result, adequate staffing, collection development, and satisfactory hours of service are difficult to maintain.

MCCALLAN, NORMA J. Delivery systems and programs. *Library Trends*, Spring 1980, *28*, 525–561.

Investigates many aspects of rural bookmobile services, rural books-by-mail services, and programming in rural libraries by means of three questionnaires answered by 18, 15, and 18 respectively. Among the topics pursued were costs, patron use, circulation numbers, types of materials circulated, services other than circulation, innovative programs, most requested materials, expectations for the future, advantages and disadvantages of the services, major problems encountered, cataloging, types of programs provided and the major benefits and problems of each.

VAVREK, BERNARD. Information services and the rural library. *Library Trends*, Spring 1980, *28*, 563–578.

Surveys, by means of a questionnaire, authorities in 80 rural public libraries in Pennsylvania and 16 libraries comprising the Clarion District Library Association in 1978 to determine services offered. Library services, especially reference services, are limited in rural libraries because of low per capita expenditures and unavailability of professional staff. An average of six reference questions (directional, ready reference, research) per hour were asked by patrons per library. The librarians surveyed indicated that school assignments, history, genealogy, and "how-to" questions were the most frequently asked; questions which could not be answered fell into business or technical areas.

SINGH, B. N. Information needs of engineering scientists in India. *International Library Review*, April 1981, *13*, 167–188.

Reports the results of a citation analysis of 33 issues of a scientific Indian engineering journal and a questionnaire completed by 42 research scholars and engineers to determine the characteristics of information needs of engineering scientists in India. Primary source needs included, in order, journals, conference proceedings, research reports, theses, and monographs. Abstracting indexing journals, survey type, and reference book types and textbooks were needed secondary and tertiary sources.

Other needed sources, both direct and indirect, included those up to 15 years old, foreign journals, and medical and biological journals.

WILLIAMSON, KIRSTY, & STAYNER, RICHARD. Information and library needs of the aged. *Australian Library Journal*, November 1980, *29*(4), 188–195.

Describes a Delphi study of information and library needs of the aged in Melbourne, Australia. The Delphi technique involves a series of questionnaires which are completed by members of a selected panel who have considerable experience with the field under study. The panel in this study consisted of 26 people who had had contact with the aged over many years. Two self-administered questionnaires, each consisting of information needs and library services sections, were used. Most round one questions were repeated in round two. Each panel member received a summary, on which his first round of answers were plotted. On the second questionnaire he could change his responses if he wished. Results related to various aspects of the questionnaire were reported.

LYMAN, HELEN HUGUENOR. Literacy education as library community service. *Library Trends*, Fall 1979, *28*, 193–217.

Reviews the history and research related to the involvement of libraries in the development of literacy in the United States from 1955 to 1980. The specific topics reviewed include the clientele, program development, materials service, patterns of service, education and training.

BEZUGLOFF, NATALIA, B. Library services to non-English-language ethnic minorities in the United States. *Library Trends*, Fall 1980, *29*, 259–274.

Surveys, by means of a questionnaire, officials of 102 public United States libraries to obtain up-to-date information about their foreign language collections. Seventy-two libraries have books in more than 70 languages with the largest collections being in urban industrial centers. Originally, these collections were begun to serve non-English speaking immigrants, but later continued to grow to serve as a bridge to native languages and culture in ethnic communities. Foreign language periodicals are found in 43 libraries; newspapers, in 28; discs, in 48; cassettes, in 19; pamphlets, in 11; paperbacks, in 19. Forty libraries have more than 48,000 volumes of foreign-language books for children. Details about the holdings in different libraries are included.

DECKERT, GLENN D. The availability and circulation of reading materials in an Iranian city. *International Library Review*, January 1981, *13*(1), 43–63.

Discusses the character and use of bookshops, libraries, and newspaper outlets in Iran and the utilization of these outlets as shown in a survey of 115 literate Iranian men. Bookshops are the most conspicuous source of books and are used more than libraries; the third source is the personal collection. The survey revealed that 88% of the subjects who had read one book received books from a bookshop or a bookshop and another source, while 21% mentioned the library or library and another source. Specialized libraries situated in occupational settings added significantly to book usage. The use of books varied sharply across the occupations. Most of the subjects preferred books more than newspapers and magazines, even though the latter are more available than books.

ZIELINSKA, MARIA. Public library services to Canadian ethnocultural communities: an overview. *Library Trends*, Fall 1980, *29*, 275–292.

Describes Canadian library services in respect to books and other printed materials written in nonofficial languages. The types of immigrants arriving in Canada, and the efforts of libraries in the different provinces to meet their needs are historically

presented. The Multilingual Biblioservice, a division of the National Library of Canada, serves as a major source for nonofficial language books in all the provinces and territories of Canada. When multiculturism was introduced as an official policy of the government, many libraries gave serious consideration to the specific reading needs of the populations they served and began collections in the most popular languages. The local holdings and acquisition programs in the different provinces and territories are described.

BORKOWSKI, CASIMIR, & MACLEOD, MURDO J. The implications of some recent studies of library use. *Scholarly Publishing*, October 1979, *11*, 3–24.

Critiques a recent study of book and journal use in one university library. Examined other recent studies on the use of collections in university and research libraries and compared the findings with those from the critically analyzed study. The authors point up the need to distinguish between the purposes and practices of lending and research libraries, a procedure not always followed in research on library usage.

III-7 Social and cultural influences on reading

TAN, ALEXIS S., & SCRUGGS, KERMIT JOSEPH. Does exposure to book violence lead to aggression in children? *Journalism Quarterly*, Winter 1980, *57*, 579–583.

Hypothesizes that reading violent comic books may increase aggression among 95 children in the fourth, fifth and sixth grades in two parochial schools. The results of a perliminary questionnaire showed that 17% did not read comic books with the remainder reading between one and 10 comic books a month. Boys read significantly more comics than girls. The subjects were given comic books randomly, with approximately half reading a violent one. They answered questions on the content and responded to an aggression scale which yielded two scores: a physical violence and a verbal violence score. The hypothesis was not sustained.

JACKSON, KENNETH M. Local community orientations of suburban newspaper subscribers. *Newspaper Research Journal*, April 1981, *2*(3), 42–49.

Questions 110 suburban residents concerning their newspaper subscriptions; their life settling or household settling patterns, such as their intention to remain and home ownership; and their orientation to suburban areas. This report represented part of a larger study. Nearly half planned to remain at their present address for a least a decade with 79% preferring to remain and 95% owning or buying their homes. Although many of the subjects had previously lived in the circulation area of the two newspapers, 76% of the metropolitan and 86% of the suburban subscriptions were begun after they moved to their present address. The suburban paper was rated as more relevant to their households than the metropolitan one.

LOMAN, BENGT. A literary aspect of the hidden language conflict of Finland. *Journal of Multilingual and Multicultural Development*, 1980, *1*(3), 207–216.

Traces the effects of rigid language standardization on literary development in Finland and presents the negative effects of language standardization versus the culture of dialect speaking minorities. During the early part of this century, the Swedish speaking minority in Finland had a well-defined standard norm for speech and writing. Social and cultural problems arose, especially in rural areas, for the foregoing population. The rigid adherence to the standard norm delayed the development of literature reflecting the culture of this segment of the population. During the past 25 years, new styles of writing have developed, and much prose writing uses the Suedo-Finnish Low Style.

IZUMOJI, TAKESHI. The use of picture books for education of children in kindergarten and nursery school in Japan. In Dorothy S. Strickland (Ed.) *The Role of Literature in Reading Instruction: Cross-Cultural Views*. Newark, Delaware: International Reading Association, 1981, 25–32.

Surveys attitudes of 274 Japanese mothers towards picture books. When asked to state their reasons for giving picture books to their children, many replied that they did so for the purpose of child education. A majority of mothers read to their children. The author indicated appropriate kinds of picture books which should be given to children in the six stages of mental and attitude changes described.

WARTELLA, ELLEN; ALEXANDER, ALISON; & LEMISH, DAFNA. The mass media environment of children. *American Behavioral Scientist*, September/October 1979, *23*, 33–52.

Examines the research on how children use the media and presents various theoretical accounts of the functions served by the media during childhood.

ALTHEIDE, DAVID L. The mass media and youth culture. *Urban Education*, July 1979, *14*, 236–253.

Argues that the mass media interact with various other aspects of the culture with substantial indirect effects. Research is cited and the need for additional research of the effects of mass media on all aspects of youth culture is noted. TV in particular is emphasized, although reference is made to other media.

III-8 Literacy

BEAZLEY, KIM E. Literacy and numeracy in Australian schools: base-line data. *Australian Journal of Reading*, March 1980, *3*, 19–21.

Relates findings from a two-volume report of an Australia-wide survey of literacy and numeracy, conducted by the Australian Council for Educational Research in 1976. The achievement of Australian children in reading differed little from the attainments of British and American children as measured in 1970 but were marginally inferior to New Zealand children. When writing a letter of application for employment, 50% of the 14-year-old children were able to compose one satisfactorily.

DILLON, DAVID A. Perspectives: literacy and mainstream culture in American history—Carl F. Kaestle. *Language Arts, 58*, February 1981, 207–218.

Explores the relationship between literacy and various factors in the history of American society and traces the developments of literacy to the present day. Three different ways that literacy can be studied historically were identified and discussed: crude literacy (can or cannot write without concern for level of skill), functional literacy, and purposes of literacy (its cultural content and the economic function). Literacy rates were given for different periods in different countries and in the United States since 1840, when the U.S. Census first gathered literacy figures. A way of determining functional literacy in colonial America through the number of copies of a pamphlet printed was included.

KOZOL, JONATHAN. Literacy and the underdeveloped nations. *Journal of Education*, Summer 1980, *162*(3), 27–39.

Describes literacy work in Cuba during 1976 and 1977 and compares the literacy rates in Cuba with those in the United States. The writer proposed a North American mobilization approach for overcoming illiteracy which resembles the Cuban undertaking by using young people as literacy workers and an American concept of the "generative word," both being at the heart of Cuba's politicized approach.

LUCAS, CHRISTOPHER J. Arab illiteracy and the mass literacy campaign in Iraq. *Comparative Education Review*, February 1981, *25*(1), 74–84.

Describes the extent of illiteracy in the different Arab states, the difficulties in developing literacy experienced by organizations comprised of individual states, and the success of the Iraqi literacy campaign. An increase in the numbers of primary and intermediate-level secondary schools, laws mandating compulsory education for all 6- to 15-year-old children and compulsory literacy for adults, formal classes in schools for illiterates, and the use of trained teachers eradicated almost all illiteracy in Iraq. Literacy instruction was divided into two 7-month phases: the base stage in which basic reading and writing skills, oral communication, and political indoctrination are taught, and the second stage which emphasizes occupational skills and political education.

ARNOVE, ROBERT F. The Nicaraguan national literacy crusade of 1980. *Comparative Education Review*, June 1981, *25*(2), 244–260.

Considers the Nicaraguan national literacy campaign to be a remarkable achievement because it reduced the illiteracy rate from 50.2% of the population 10 years of older to approximately 23% in five months and to 15% in nine months. Initially, almost everyone who knew how to read and write taught those who could not. Instruction was conducted almost anywhere. Although the content of the adult primers contained political messages intended to shape a new set of perceptions, it appeared that the campaign had not been successful in changing political values of the population as many had found encoding difficult as they were learning to decode. Young teachers lacking experience of adults and other factors inhibiting dialogue were among the problems faced.

INTERRACIAL BOOKS FOR CHILDREN BULLETIN. Education for change: a report on the Nicaraguan literacy crusade. New York: 1981, *12*(2), 3–7.

Describes how 110,000 literacy teachers taught Nicaragua's half million illiterates to read and write. Two groups volunteered to work in the Literacy Crusade: the Popular Literacy Army, better known as *brigadistas*, high school and college students who worked in rural areas, and the Popular Literacy Teachers, called "popular alphabetizers," who worked in urban areas. Workshops trained the volunteers who, in turn, trained others. The *brigadistas* worked in the fields with the people with whom they lived and provided two hours of instruction at nights. On Saturdays they met with other instructors or gained needed information by radio. The popular alphabetizers followed almost the same schedule in cities except that they continued working in their own jobs during the day. The rate of illiteracy fell from a national average of 52% to just under 13%.

LITTLE, GRAHAM. The decline theory: literacy and its enemies. *Australian Journal of Reading*, March 1980, *3*, 13–18.

Refutes the Decline Theory (a decline in literacy standards because of neglect of basic skills) by giving evidence on standards of literacy among the Australian population. A decrease in illiteracy was found in census reports, in a survey of functional illiteracy in Sydney, in tests of verbal ability used in the state schools, in state surveys, and in extensive surveys by the Australian Council for Educational Research. The writer agreed with the Decline Theorists that today's society demands higher standards than in the past. Several definitions of literacy were included.

STUBBS, MICHAEL. *Language and literacy. The sociolinguistics of reading and writing*. London: Routledge & Kegan Paul Ltd., 1980.

Reviews research and theories concerning the relationship of linguistics and language to reading. The writer presents a description of the state of the art and

definitions, and reviews such topics as the relationship between spoken and written language, including principles of English spelling; the functions of written language, transcriptions, orthographies, and accents; and explanations of reading failure, including initial literacy and explanations of educational failure.

BAZEMORE, JUDITH S. Two-way TV technology and the teaching of reading. *Journal of Reading*, March 1978, *21*, 518–524.

Describes the teaching of reading through a two-way cable television system in Spartanburg, South Carolina. A comparison of the average number of minutes devoted to activities in the adult at-home program and of the same classes taught in a conventional manner was made. The same teachers taught both types of classes. Both pre-GED and GED classes are offered; the comparison was made of pre-GED classes. The success of the program depends upon the number who pass the GED examinations. The drop-out rates were lower and the percentage passing the examinations was higher for the cable class than for the conventional class, but the numbers (10, 22) were quite small. Details of the program are included.

WHITE, ROBERT. *An alternative pattern of basic education: Radio Santa Maria*. Paris, France: Unesco, 1976.

Presents a descriptive case study of lifelong education program sponsored by Radio Santa Maria in the Dominican Republic. This model of adult education combined six different learning experiences: weekly lesson sheets; daily broadcast explanation of the sheets, personal guidance of a field teacher, weekly discussion with teacher and assembled students, supporting cultural and educational radio programs, participation of students in existing community organizations. The data revealed that the levels of academic achievement of the students in this program and their levels of critical social awareness are notably above those of students in the conventional classroom system. The history and goals of the program, the socioeconomic background of the students, details of how the model works, the influence of the program on student attitudes, and cost per study are included in the report.

WHYTE, JEAN. Language and reading: a study of adult literacy students in Northern Ireland. *Journal of Reading*, April 1981, *24*, 595–598.

Studies linguistic and cognitive functions among adults in a literacy program in Northern Ireland. Two groups of subjects (17 experimental and 22 control) of similar age, mental ability, and type of employment but different reading ages (8.0 or less and 12 or above) responded to four tasks. These included the classification of items or ideas which grew progressively dissimilar, interpretation of metaphors, integration of metaphors, integration of cognitive skills, and ideational fluency in context bound and context-free situations. The literacy (experimental) subjects performed as well as the normal (control) readers on concrete operations but performed less well on abstract tasks. Among the adult literacy students, listening comprehension and language production were less well associated. The tasks on which these subjects received lower scores required some kind of operation on the material and the production of language.

NEVILLE, MARY H. Learning to read in Japan. *Reading*, April 1978, *12*, 21–28.

Offers a rationale for the low illiteracy rate in Japan by analyzing findings of research literature and drawing some conclusions about possible differences between the Japanese writing system and the English system that may contribute to differences in learning.

III-9 Reading in non-school settings

DIEHL, WILLIAM A., & MIKULECKY, LARRY. The nature of reading at work. *Journal of Reading*, December 1980, *24*, 221–227.

Specifies the literacy demands 107 subjects from 100 occupations and 26 sites encountered in their work. The subjects responded to the *Diehl-Mikulecky Job Literacy Survey* in which they described the reading tasks completed on the job during the previous month. The cited reading materials were classified into four categories: reading-to-learn, reading-to-do with no learning, reading-to-do with incidental learning, and reading-to-assess. These categories were divided into 16 specific strategies. The subjects (99%) reported an average of 113 minutes per day spent in job reading; almost 80% of the tasks named were considered unnecessary to job completion. Differences between school reading and work reading were discussed.

HERRIOT, PETER, & ROTHWELL, CAROL. Organizational choice and decision theory: effects of employers' literature and selection interview. *Journal of Occupational Psychology*, 1981, *54*, 17–31.

Investigates in two experiments the effects of employers' brochures and selection interviews upon the intentions of students to apply for positions with organizations. In the first experiment, 96 mechanical and electrical engineering students in two English universities, divided into six groups, read employers' or travel brochures and answered a questionnaire on their own time. Analyses of variance were carried out with the different factors involved. It was concluded that certain types of brochures affected intentions of the subjects to apply, but there was no evidence that this effect was mediated through the predictor variables of decision theory. In the second experiment 72 subjects were interviewed, but no reading was involved.

PYRCZAK, FRED. Effects of abbreviations on comprehension of classified employment advertisements. *Journal of Reading*, December 1980, *24*, 249–252.

Explores the effects of abbreviations on the comprehension of classified employment ads by 244 students from three high schools and by 47 graduate students in education. The test administered consisted of two parts: three advertisements from a newspaper and these same advertisements rewritten without abbreviations. The same 14 questions were asked for both parts. The performance of high school students on the second part was significantly superior to that on the first part.

III-10 History of reading instruction

CRESSY, DAVID. Teaching reading in early-modern England. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Fourth Yearbook*, 1980, 114–118.

Delineates details of reading instruction in preindustrial England and colonial America. Three or four hundred years ago the standard elementary curriculum was comprised of pronouncing orally and writing letters, syllables, and words. The alphabet then consisted of 24 letters (*i* and j were the same as were *v* and *u*) and was fundamental to the remainder of the curriculum. The pupils learned letters from the horn book, drilled in letter combinations until they could spell them, used the ABC or primer books, and then read from the Protestant Christian catechism or the Bible. Literacy was promoted for religious reasons. Writing instruction was more complex than reading instruction, the latter requiring two years.

BELOK, MICHAEL V. Schoolbooks, pedagogy books, and the political socialization of young Americans. *Educational Studies*, Spring 1981, *12*(1), 35–47.

Presents examples of the concern for national identity and character, as well as religion, in both the early American schoolbooks and pedagogy books. Emphasis was placed on forming a national consciousness and the preservation of the nation-state and its particular form of political organization. Examples from textbooks published in the latter part of the eighteenth and the early part of the nineteenth centuries are included.

III-11 History of newspapers and magazines

SMITH, ANTHONY. *The newspaper: an international history*. London: Thames and Hudson, 1979.

Presents the steps in the worldwide development of the newspaper. Emphasized throughout the book are the relationships of newspaper developments with current issues in each country, the politics of journalism, the battle for freedom of expression, and the technological developments from the early wooden presses to the latest computers. Prominent people in journalism and their contributions are included. There were four stages through which news publishing passed before newspapers emerged: the publication of a single story, a continuous series of relations published in the form of a coranto, weekly account of news on successive days (the diurnall stage), and the mercury stage in which news appeared in the form of a book. Included in the book are 111 illustrations which show in pictorial form the various developments of newspaper publication throughout the world.

SHABER, SARAH R. Hemingway's literary journalism: the Spanish Civil War dispatches. *Journalism Quarterly*, Autumn 1980, *57*, 420–424, 535.

Examines Hemingway's reporting techniques used in 1937–38 as possible models for today's journalists. During that time Hemingway covered the Spanish Civil War for the North American Newspaper Alliance. His journalistic writing was literary because it sought to tell a story and to describe a slice of real life. He used literary techniques usually absent from mainstream reporting. His sole motive as a correspondent in Spain was to communicate to his American readers a feeling for the Spanish American Civil War experience, in which he conveyed the horrors and deprivations of war. It was concluded that all journalism today should not be literary, but neither should today's writers ignore Hemingway's techniques.

CUTHBERT, MARLENE. Reaction to international news agencies: 1930s and 1970s compared. *Gazette*, 1980, *26*, 99–110.

Finds the types of protests of the Americans in the 1920s and 30s against European domination of the news that came to the United States via the Associated Press to be similar to those of the Third World against world domination of international news channels often resulting in imbalanced news about Third World countries. In the first period AP's problem arose from involvement as the junior partner in an international news cartel formed by European agencies for news gathering and distribution. In the 1970s the developing countries noted a similar problem because most international news was carried by only five global agencies based in the United States, Britain, France, and Russia. During both periods, those who had only limited news outlets felt that they were stereotyped by those who controlled the news outlets.

ISOBA, JOHN C. G. The rise and fall of Uganda's newspaper industry, 1900–1976. *Journalism Quarterly*, Summer 1980, *57*, 224–233.

Traces the history of newspaper publication in Uganda. Because not much is known about the first mimeographed paper which appeared in 1897, many regard *Mengo Notes*, established in 1900 by the Christian Missionary Society, to be the first one. The *Uganda Herald*, the first commercial privately owned newspaper founded in 1912, was the major newspaper for 44 years. The newspaper industry started slowly and expanded rapidly in the 1950s and 1960s, but by the end of 1976 only 14 of the 84 newspapers established over a period of 79 years still existed. The major factors contributing to the decline of the newspaper industry were the problems faced by African journalists, small foreign investment, and the strong competition of foreign newspapers.

CRESPI, IRVING. Polls as journalism. *Public Opinion Quarterly*, Winter 1980, *44*, 462–476.

Traces the history of newspaper and magazine polling from 1820 to the present time and examines problems, weaknesses, and strengths of different kinds of public opinion polls. The discussion includes the work of syndicated polls (as Gallup and Fortune Polls) as well as media-sponsored and media-conducted polls. The problems related to timeliness, newsworthiness, objectivity, and fast-breaking news are delineated. Human interest and trend polls do not become outdated and are often used. Crespi concluded that public opinion polling has always had close financial and institutional ties to journalism, with many of its strengths and weaknesses derived from these ties.

PITCHER, E. W. Fiction in *The Boston Magazine* (1783–1786): a check list with notes on sources. *The William and Mary Quarterly*, July 1980, *37*, 473–483.

Describes the kinds of fiction found in a literary magazine published between 1783 and 1786 and traces the original sources of 66 items. Only one-sixth of the tales and fables were written by local authors, but many others were originally unidentified. The principal sources of the stories were contemporary British periodicals. During the first six months of publication, the fiction in the magazine was limited to short comic or moralistic tales, fables, and visions; but after May, 1784, it included longer sentimental, oriental, and Gothic stories with more complex plots and characterization. Included in the report is a list of fiction with as many authors and sources identified as were located.

SEATON, HAL W., & MOORE, DAVID. Publishing in reading: policies, trends, and problems. *Reading Improvement*, Winter 1980, *27*, 267–268.

Reviews research about trends in publication of manuscripts and presents an overview of policies of 106 journals regarding lag time, acceptance rates, and reasons for rejections. Suggestions are given concerning ways to disseminate educational manuscripts.

III-12 Newspaper and magazine publication

MADDUX, THOMAS R. American news media and Soviet diplomacy, 1934–41. *Journalism Quarterly*, Spring 1981, *58*, 29–37.

Traces the attitudes of the news media towards Soviet diplomacy by an analysis of 35 U. S. newspapers representing a wide range of geographical locations, political outlooks, and circulation. Editorials and columns rather than straight news stories were examined in each newspaper for 34 days from 1933 through 1941. When each newspaper was assessed on its views about the Soviet system, Stalin's diplomacy, and the American communists, 20 were classified as conservative and 15 as liberal. Papers were also ranked according to their interest in foreign affairs. Difficulties arose in classifying ideas, because editors shifted their opinions, especially during 1939–40. The newspapers with the most interest in foreign affairs believed Stalin had abandoned hope for world revolution while those with less interest continued to see him as an imperialist. Neither isolationism nor the partisan political orientation of the newspaper influenced the assessments of Soviet diplomacy as much as their degree of interest in foreign affairs.

HYNDS, ERNEST C. Newspaper education coverage has been expanded, improved. *Newspaper Research Journal*, April 1981, *2*(3), 70–76.

Surveys 186 newspaper officials in four population groups in five regions to determine details about educational coverage during recent years. Almost all (97%) used education stories, with approximately one-third devoting a special section to education. Many have expanded the coverage in recent years and devote at least 5% of their news holes to education. Most cover a variety of educational activities. Education generally gets more space then religion or the arts but less than sports, editorials, or women's (family) news. Circulation size did not seem to determine the amount of space given to educational concerns.

STONE, GERALD C.; STONE, DONNA B.; & TROTTER, EDGAR P. Newspaper quality's relation to circulation. *Newspaper Research Journal,* April 1981, *2*(3), 16–24.

Relates the quality of newspapers to their circulation. Quality was determined by asking judges in each of the 50 states to list their first four choices of good and bad journalistic products among dailies under 200,000 circulation published in their own states. A rating system comprised of ratings given by judges and the number of judges giving certain ratings was devised. Seventy-nine papers were rated superior and 45, inferior. Stepwise multiple regression analyses were performed to determine the effect, if any, newspaper quality had on circulation using city zone, trade zone, and total circulation as measures of circulation. Newspaper quality was found to be a strong predictor of city zone and total circulation but added little in explaining the variance of trade zone circulation.

SINGLETARY, MICHAEL, & NEWLIN, DAVID. Readers' and editors' agreement on evaluation of award-winning newspapers. *Newspaper Research Journal,* July 1980, *1*(4), 46–53.

Questions whether newspaper readers judge newspapers as editors do. Three newspapers rated first, third, and eighth (last) for excellence by members of a state press association were evaluated by three groups of undergraduate students (41, 44, 40) with an average age of 27. They agreed with the professional judges on the last place newspaper but not on the first- and middle-rated ones. Since each group judged only one newspaper, a second experiment was conducted in which 23 beginning journalism students judged all three papers. The results were the same as when the subjects evaluated only one newspaper.

RIPPEY, JOHN N. Use of polls as a reporting tool. *Journalism Quarterly,* Winter 1980, *57*, 642–646, 721.

Inquires of 437 newspaper editors through a mail survey whether their papers used opinion polls developed by themselves to gather information on which to base stories. Polls had been conducted by 37% of the newspapers tapped, with a strong significant relationship being found between circulation size and having conducted an opinion poll. A marked increase in this activity occurred after 1970. The subjects showed interest in topics other than elections and thought the poll information was well read. The telephone survey was the method most often used.

HIGHTOWER, PAUL. A study of the messages in depression-era photos. *Journalism Quarterly,* Autumn 1980, *57*, 495–497.

Compares the meanings obtained by 20 subjects from eight photographs printed in newspapers from 1936 to 1943 with that intended by the photographer. The subjects wrote about each photograph with no time or length limitations; judges determined the extent of agreement between each subject and the photographer. Modest agreement (31%) was found.

SCHWEITZER, JOHN C. Newspaper front pages revisited: reader reactions. *Newspaper Research Journal,* October 1980, *2*(1), 12–18.

Surveys 376 newspaper readers for their preferences about front page layouts. Three front page mockups of one Ohio paper were prepared and shown to the subjects, one being more traditional than the other two. The difference between the two non-traditional formats was that one displayed the news column summary vertically on the left-hand side of the page while the other displayed it horizontally across the bottom of the page. The subjects, regardless of demographic classifications, preferred the vertical news summary and preferred it to be on the first page. The least preferred format was the traditional one without boxes at the top of the first page.

GARCIA, MARIO; CLICK, J. W.; & STEMPEL III, GUIDO H. Reader response to redesign of St. Cloud *Daily Times*. *Newspaper Research Journal*, January 1981, *2*(2), 36–41.

Evaluates changes in format of one newspaper in two surveys, one at the time when the redesigned paper first appeared and one three weeks later. Two separate groups of subjects (162, 179) completed telephone interviews in which they gave their reaction to the overall change and to 10 specific changes. The design of the newspaper was immediately accepted by the readers who were aware of both the obvious and subtle changes. Acceptance was slightly higher in the second survey than in the first one.

HIMEBAUGH, GLENNA., & KENNEDY, MARK K. Book reviewing in the metropolitan press: a comparative study. *Newspaper Research Journal*, October 1980, *2*(1), 43–47.

Compares the results of a 1980 survey regarding general policies, content, and philosophy of newspaper book review sections with those of a 1959 survey administered by the senior author. In 1959, 20 book review editors responded to the 29-item questionnaire; in 1980, 49 responded. Significant changes included trends for book review sections to be in only Sunday papers with a decrease in space and the omission of best-seller lists in some papers. A marked increase in literary news material and effort to balance fiction and non-fiction reviews were noted. Similar results from the two surveys included the kinds of books the editors refused to review, the average number of words used, and the basic elements of a good review.

CLIPPINGER, MORGAN E. Kim Chong-il in the North Korean mass media: a study of semi-esoteric communication. *Asian Survey*, March 1981, *21*(3), 289–309.

Documents how the North Korean regime and press used code names to build up the potential future leader in North Korea, Kim Chong-il. The use of code names has played an important part in the political communications of China's leadership, but the use of code names to refer to a successor seems to be a North Korean innovation. Because the succession was considered a sensitive matter with serious security implications, code words, especially "Party Center," were used to refer to Kim Chong-il whose name was seldom used in the media. Examples of how the code name was used are included. This type of communication appeared to be a compromise between a perceived need to maintain official silence and an objective need to conduct a buildup to acquaint the population with their potential future leader. An abrupt termination of the procedure occurred in 1977, probably for several reasons.

EINSIEDEL, EDNA, F., & FIELDER, VIRGINIA DODGE. Newspaper treatment of a controversial series: a case study of "Johnny still can't read." *Newspaper Research Journal*, July 1980, *1*(4), 30–37.

Surveys 156 newspapers that published the "Johnny still can't read" series for their reactions to and their treatment of the series. Over four-fifths of the newspapers ran the series as released by the Associated Press News features; one-fifth reported editing the series. In giving their perceptions of strengths and weaknesses of the series,

48% stated that the series focused on an important problem, but approximately 66% noted that the series was one-sided, undocumented, and or propagandistic. A majority of the newspapers did not run related articles except letters to the editor.

BLUM, ABRAHAM. International science education. *Science Education*, January 1981, *65*, 65–70.

Analyzes scholastic science magazines for young people published in 1977/78 in the United States, Great Britain, Israel, Kenya, and Zambia for content, style, use of color, photographs, quizzes, and cartoons. Publishers completed questionnaires also. Four different approaches were identified: a fully commercial approach, a reluctant commercial approach, direct subscription approach, and a subsidized approach. Nearly all of the magazines are written mainly for extracurricular reading; very few magazines related to science are published in any of the countries, largely because publishers find it difficult to make a profit from these.

HYNDS, ERNEST C. Business coverage is getting better. *Journalism Quarterly*, Summer 1980, *57*, 297–304, 368.

Surveys 186 newspapers through a four-page questionnaire concerning their approach to business news, amount of coverage, sources of information, changes and trends in the field and perceived impact and strengths. When the newspapers were grouped by circulation and by geographical region, it was found that the size of the newspaper, but not the section of the country, made a difference in the coverage of business news. It was concluded that daily newspapers, especially those of 50,000 or more circulation, devoted more space to business news and are making a greater effort to interpret business news than formerly. Less space is assigned to business news than to sports, women's news, crime news, or to the editorial page, but about as much space is given to business as is devoted to religion and arts in most newspapers.

III-13 Book publication and the history of print

JAMES, JEAN M. Signs in ancient Egypt: another look at the relation of figure to hieroglyph. *Visible Language*, 1980, *14*, 52–61.

Describes a possible relationship between depictions of the early human figure in Egyptian art and hieroglyphs which appear with them. Pictures preceded hieroglyphs as messages at approximately 3400 to 3200 BC. Details of changes in pictures and in hieroglyphs are described verbally and pictorially through the Third Dynasty. It was concluded that early Egyptian art, primarily of figural signs, should be thought of a pictographic language.

SMITH, JR., DATUS C. Scholarly publishing in the Third World. *Scholarly Publishing*, April 1981, *12*, 195–218.

Surveys scholarly publishing, especially that done by university presses, in the developing areas of Latin America, Africa, Middle East and North Africa, and Asia. Among the conclusions drawn are the following: University presses are not very important to scholarly publishing in the Third World. The number of active university presses in these countries has probably decreased in the last decade. Publications from these countries written in English, French, and Spanish do not reach rich, foreign markets; marketing within these countries is poor also. The titles suggest great improvement in that they seem to be concerned with social, economic, and political problems of their own areas and of their own cultural heritage. Textbook publishing is thought to be an easy way of paying the costs of a university press but is not always the right solution.

GEDIN, PER. Books in the marketplace. *New Universities Quarterly*, Winter 1980, *35*, 37–56.

Analyzes Swedish book publication and compares it to that in other countries. During the 70s the Swedish bookmarket was shaken in spite of a flourishing economy with the result of a severe cutting down of literary lists. Gedin concludes that the crisis of the book market is a structural crisis, not a temporary weakness, and was caused by the change from a bourgeois society to a mass or service society, which places a lower value on books and reading. The causes of the decline in publication were investigated through an analysis of the social, political, and economic contexts. The United States did not go through the change that other countries did because it never had a bourgeois society.

BLUM, ELEANOR, & CHRISTIANS, CLIFFORD. Ethical problems in book publishing. *Library Quarterly*, April 1981, *51*, 155–169.

Makes an inductive inquiry of 140 publishers concerning ethics in book publishing. The results of an open-ended questionnaire showed that the four concerns expressed most often were for quality in all editorial and production processes, for handling morally the tensions between authors and editors, for treating support personnel fairly, and for promoting materials truthfully. The dedication to the free flow of ideas emerged repeatedly; all kinds of censorship were rejected. The subjects were hostile to government intervention and believed that federal and state regulations were counterproductive. It was concluded that the common concerns reflected a classical liberal world view.

BLAKELY, PATRICIA. Selling regional books. *Scholarly Publishing*, April 1981, *12*, 269–280.

Reports on the publication and distribution of regional publications through a case history of one book published by a university press. The content was concerned with Minnesota's major watersheds. Purchasers of the book (resale including bookstore chains, independent bookstores, special outlets, university bookstores, wholesalers; special discount buyers; libraries and other institutions; individuals) were classified into one of four geographic categories according to the location of the originator of the order. The results confirmed that the market for regional books is highly centralized, with diminishing returns in state, regional, and national borders.

III-14 Publication and history of juvenile books

DOOLEY, PATRICIA. The window in the book: conventions in the illustration of children's books. *Wilson Library Bulletin*, October 1980, *55*, 108–112.

Delineates in the 300 year history of illustrations in children's books restrictions of the medium in achieving an accurate representation of the real world and how illustrators have attempted to overcome these limitations. The pictorial tradition of making a window in the book was achieved in the fifteenth and sixteenth centuries by various types of frames used around the illustrations. Book art in children's books has been generally conservative and slow to adopt innovations in printing. Captions were important in eighteenth century books; at this time engravings were substituted for woodcuts. In comparison with the chapbooks, the number of illustrations in books today has declined. No longer are design corrections used such as the decorated capitals, vignettes, and elaborate borders.

HUUS, HELEN. Literature for children: an emerging discipline internationally. In Dorothy S. Strickland (Ed.) *The Role of Literature in Reading Instruction:*

Cross-Cultural Views. Newark, Delaware: International Reading Association, 1981, 1–13.

Details four stages through which children's literature progresses in becoming a discipline: (1) The creation of a unique body of knowledge is accomplished through the establishment of libraries and special collections, the publication of professional books, and the presentation of exhibits, fairs, and festivals. (2) The establishment of standards is accomplished through conferences and journals. (3) Recognition by peers and colleagues comes through organizations. (4) Acceptance by the academic world is possible through teacher education, research centers, university research, and research organization. Extensive international examples are given for each of the foregoing categories.

SUTHERLAND, ZENA. The problems of translating children's books. In Dorothy S. Strickland (Ed.) *The Role of Literature in Reading Instruction: Cross-Cultural Views.* Newark, Delaware: International Reading Association, 1981, 15–24.

Reviews the obstacles in translating juvenile books among and within nations. With the functions of the translator being to produce a version of the original work satisfactory to an editor, the translator has the difficult problem of choosing the middle path between literal translations, often stiff and awkward, and free ones that lose resemblance to the original work. Among the problems cited were the translation of exact words, such as measurement terms, for which there are no equivalents; idiomatic expressions; cultural amplifications; and content dependent upon background knowledge. Various needs in the translation of children's books were discussed.

III-15 Freedom of the press and censorship

ATKINS, CAROLYN PELUSO, & CARLINE, JOHN L. Reading materials in the public schools: selection and controversy. *Contemporary Education,* Summer 1980, *51,* 182–185.

Examines 13 court rulings and current school district written policies pertaining to the selection and restriction of reading materials. Superintendents in 101 public school districts, classified as small, medium, and large schools, in seven states returned a questionnaire concerning written policies about reading materials. Fewer than half had written policies. Elementary schools and large and medium sized districts were more likely to have written policies than were high schools or smaller districts. Those most involved in textbook selection were, in order, teachers, administrators, school boards, and parents; university staff and pupils were least likely to be consulted. Four groups of court cases were identified: those involving evolution and freedom of religion, those seeking to have certain materials included in the curriculum, those seeking to prevent the use of certain materials; and those involving the dismissal of teachers for the use of certain materials.

WHITE, HOWARD D. Library censorship and the permissive minority. *Library Quarterly,* April 1981, *51*(2), 192–207.

Reanalyzes a 1970 nationwide survey of 2,486 American adults, conducted for the commission on Obscenity and Pornography, to make new comparisons of the large majority who favored censorship of erotic materials with the minority who opposed it. When the two groups were compared on measures of background, attitudes, and experience, significant differences were found. Those opposing censorship were younger, better educated, more open to mass media, and more liberal and permissive. The anti-censorship position appears to be a part of a general liberal ideology that extends to other social problems.

WOODS, L. B., & SALVATORE, LUCY. Self-censorship in collection development by high school library media specialists. *School Media Quarterly*, Winter 1981, *9*(2), 102–108.

Studies the practice of self-censorship of controversial books by 478 secondary school librarians who completed a one-page questionnaire. The librarians were asked if their libraries owned or intended to own any of 52 controversial titles, one news magazine, one play, and one rock musical; if they had the foregoing materials, they indicated whether they put restrictions on their circulation. No title was onwed by all libraries. Of the titles surveyed 42 (80.7%) were on restricted access. It was concluded that self-censorship was being practiced by high school librarians.

NAM, SUNWOO. The Korean press after Park. *Gazette*, 1980, *26*, 259–266.

Describes the Korean press after the administration of President Park Chung-Hee. Although there are mixed signs of liberalization of the press, there is still a tight censorship by the military. The emergence of General Chon Du-Whan, the army security commander, as the key member of the real power center, was thought to forbode ill for the Korean press. His name and role are a secret to the Korean people because nothing is written and published about him. Nor is anything published about Park because of the friendship between him and Chon. The future of the Korean press depends upon the intentions of Chon and a popular demand for more liberalization.

HANSEN, JUDY P., & BISHOP, ROBERT L. Press freedom on Taiwan: the mini hundred flowers period. *Journalism Quarterly*, Spring 1981, *58*, 38–42.

Reviews events related to Taiwanese press freedom during 18 months in 1956 to 1958. When President Chiang issued a call for the nation to give him advice on national affairs and to make suggestions for his public and private life, the nation, including the press, took him at his word and gave much criticism. In November, 1956, Chiang reacted by appointing a committee to compile all of the suggestions. Not much was heard about the results of the committee's work. The government passed amendments to the country's strict Publications Law ostensibly to curb "yellow journalism" but really to stop criticism of the government. Criticism continued until journalists were imprisoned for their writing. Comments from several authorities concerning press freedom today in Taiwan were included.

KNUDSON, JERRY W. The Chilean press since Allende. *Gazette*, 1981, *27*, 5–20.

Discusses the impact on the Chilean press of the overthrow and murder of Allende by the military regime. The press, which was restricted to some extent under Allende, was severely and harshly censored under the military junta. The impact on specific newspapers, and magazines and on radio and television was discussed. The author concluded with his views of the future of the Chilean press.

UTOMI, PATRICK. Historical-philosophical foundations of government ownership of newspapers in Nigeria. *Gazette*, 1981, *27*, 69–72.

Discusses the steady increase in government ownership of newspapers in Nigeria. Traces the philosophical and historical origins of this takeover to the pre-colonial political structures of three major Nigerian tribal groups: Hausa-Fulanis, Ibos, and Yorubas.

III-16 Reaction to printed materials

SHAW, DONALD L.; COLE, LYNDA P.; MOORE, ROY L.; & COLE, RICHARD R. Men versus women in bylines. *Journalism Quarterly*, Spring 1981, *58*, 103–106.

Investigates whether byline sex would be noticed and whether it would influence the 90 journalism and 60 nonjournalism college students in their evaluation of the news stories. The subjects read four news stories on different topics, each having either a male or female byline. After reading the stories, the subjects answered questions about each story, including the correct identification of the bylined reporters from a list, and evaluated the quality of the stories on a seven-point scale using 14 sets of bipolar adjectives. More than half the time the subjects remembered the correct sex of the writers; the female byline was remembered better for the legal-appeal and fashion stories while the male one was linked to the sports and rape stories. The byline sex did not make any difference in any semantic differential evaluations.

SINGLETARY, MICHAEL W., & STULL, GENE. Evaluation of media by Pennsylvania police chiefs. *Journalism Quarterly*, Winter 1980, *57*, 655–658.

Investigates the attitudes of police chiefs towards radio, television, and newspapers as well as towards news coverage related to their work. Survey forms were sent to 312 small, medium sized, and large police departments in Pennsylvania; 170 responses, or 55%, were returned. The results showed that these chiefs depended most on newspapers and least upon radio for news. Though they considered radio to be the most accurate, they thought newspapers covered police news the best. They held newspapers in higher regard than radio or television.

RIFFE, DANIEL. Relative credibility revisited: how 18 unnamed sources are rated. *Journalism Quarterly*, Winter 1980, *57*, 618–623.

Replicates an earlier study to determine if credibility ratings of unnamed news sources vary over time. Two versions of the original instrument were prepared by dividing the 18 (out of the original 20) still-used sources with one-half using single-sentence news lead contexts and the others being out of context. In the second version the reverse ordering of sources was used. The 85 college subjects indicated their degree of acceptance or rejection of the credibility of each source on a seven-point scale. Analysis by t-tests identified eight significant differences between the 1960 and 1979 mean scores. The groups surveyed appeared to reflect their own era. In the current study unnamed government sources were viewed as less credible than those in the 1960 study but were still regarded as more believable than unbelievable.

III-17 Effects of reading

RUBIN, RHEA J. Uses of bibliotherapy in response to the 1970s. *Library Trends*, Fall 1979, *28*, 239–252.

Reviews the uses, history, and trends of bibliotherapy at the present time. Three current trends were noted: interest in self-actualization, preoccupation with psychological causation, and mainstreaming and deinstitutionalization. The current uses of bibliotherapy can be traced to origins in medical and mental hospitals; the first known example of a librarian using books in the treatment of mental patients was in Massachusetts in 1904. Educational settings for bibliotherapy began in the 1940s. Community use of bibliotherapy is considered a trend of the future. Three types of bibliotherapy include institutional, clinical, and developmental.

BYBEE, CARL R. Facilitating decision-making through news story organization. *Journalism Quarterly*, Winter 1980, *57*, 624–630.

Questions if decision-making can be facilitated by specific kinds of information presentation formats. The subjects were 74 students from a college public speaking class, with approximately 18 subjects per condition. The subjects read the decisions required of them concerning candidates for office and the materials upon

which the decisions were to be based. They also indicated the length of time required to make their decisions, the recall of the candidates' stands on issues, cognitive strains in making their decisions, and their degree of satisfaction with their decision. Two information presentation formats were used: organized by issues (attribute by attribute), organized by candidates (alternative by alternative) under high and low complexity conditions. In general, the subjects reading under the alternative format recalled more about candidates, required less time to make decisions, and reported less stress in making their decisions. No significant differences were found between the two formats concerning satisfaction of the decisions made.

FEDLER, FRED, & COUNTS, TIM. Variations in attribution affect readers' evaluations of stories. *Newspaper Research Journal,* April 1981, *2*(3), 25–34.

Determines the effects of various alternations in attribution in a controversial news story about the Equal Rights Amendment and a non-controversial one about the problems of handicapped Americans. The 160 subjects, divided into groups of 20, read one of four versions of each story. The first story contained no attribution; the second quoted an unidentified source; the third quoted an identified source, and the fourth quoted one identified source whose statements were refuted by a second identified source. Changes in the controversial story's attribution significantly affected the readers' perceptions of its accuracy as well as the extent to which they agreed with it. They considered it less accurate with identified and unidentified sources than with no attribution or two opposing sources. Changes in the non-controversial story failed to affect significantly the readers' agreement with it. The changes in attribution in either story had no effect about who or what, according to the readers, was responsible for the accuracy of the story.

JAEHNIG, WALTER B.; WEAVER, DAVID H.; & FICO, FREDERICK. Reporting crime and fearing crime in three communities. *Journal of Communication,* Winter 1981, *31*(1), 88–96.

Assesses the relationship between size of communities and perceptions of crime, the accuracy of press reports of crime and the number and nature of crimes committed, personal experience or knowledge of crimes and press reports, and public knowledge of crime and fear of being a victim of crime. A panel of 45 people in three communities of different sizes answered questions concerning crime. Only a weak relationship was found between televiewing and fear of crime. Newspapers were content analyzed for coverage of crime. The amount of crime coverage in each community and people's fear of crime correlated more with the number of violent crimes per person in that community than with the number of crimes in general.

REESE, STEPHEN D., & MILLER, M. MARK. Political attitude holding and structure. The effects of newspaper and television news. *Communication Research,* April 1981, *8*, 167–188.

Examines the effect of television and newspaper news exposure on the holding and structure of political attitudes. Ideological utility was treated as an intervening variable and was defined as the usefulness, to a person describing political beliefs, of the traditional dimensions of liberal conservative and left right. The more ideologically sophisticated were presumed to be more familiar with these dimensions and better able to place themselves accordingly. Data were from the 1976 University of Michigan CPS national election study (N = 2402). Attitude consistency was treated as a variance of a person's responses to a series of nine bipolar political issue scales, indicating how consistently liberal, conservative or neutral a person's attitudes were. Both television and newspaper news exposure were positively associated with attitude holding at low levels of ideological utility. Television news exposure was positively associated with

attitude consistency at low levels of ideological utility, but the opposite was true of newspaper exposure. The results suggest that television news helps viewers form opinions about political issues and structure them in a meaningful way.

III-18 Research techniques

BEAN, DONALD P. The quality of American scholarly publishing in 1929. *Scholarly Publishing,* April 1981, *12*, 259-268.

Identifies five reasons for the publication of inferior research studies: lack of editorial rigour on the part of editors, undue emphasis by colleges and universities on quantity of publication, lack of proper training of graduate students, pressures for abbreviation of content of the studies, and weakness in criticism after the publication of the research. This article was a reprint of Bean's 1929 evaluation of published research which was the first major study of American scholarly publishing. It was published again to make available an almost forgotten document and to remind readers that some concerns change little even after more than a half century of discussion.

NORTON, JR., WILBERT H. Newspaper reader feedback and editor implementation: an approach. *Mass Communication Review,* Winter 1979-80, *7*(1), 9-15.

Uses a formal feedback system to provide a way for editors to consider reader interests and needs when editorial decisions are made. The plan required an editor to interview typical readers as selected through surveys and Q studies. Focused interviews were conducted with 284 college students to determine what they considered to be newsworthy. Articles were sorted by 71 people according to whether they would be included in an ideal newspaper. Two experimental newspapers were developed, one based on the results of Q-sorting and the other on the results of a Q-block questionnaire. It was concluded that the interviews were more profitable to the editor than the other steps taken in this particular plan.

PASADEOS, YORGO. Yeasaying in readership surveys: an example. *Journalism Quarterly,* Winter 1980, *57*, 670-674.

Investigates the extent of "yeasaying" in a newspaper readership survey and determines if "yeasaying" varied in responses obtained through a mail or telephone survey. Two stratified random samples (N = 178, 173) from a newspaper's subscriber list answered questions in which they indicated how often they read the regular and special sections of the paper. To check for "yeasaying" a fictitious special section was included. Data from the 60 subjects who stated that they remembered seeing the bogus section were analyzed separately from the 269 who gave a "no" response. The results of chi-square tests showed the difference in the two groups to be statistically significant for 8 of 13 special sections. Mail "yeasayers" had significantly more "yes" answers than the telephone "yeasayers." The findings of the study raised questions about recall validity.

RYAN, MICHAEL. The Likert scale's midpoint in communications research. *Journalism Quarterly,* Summer 1980, *57*, 305-313.

Reports results of two mail surveys in which the "no opinion" category on the Likert scale was treated differently. The first study examined the attitudes of 61 educators and 38 editors toward the journalism school's role in media criticism; the second, the attitudes of 110 scientists and 122 science journalists toward media coverage of science news. Different statistical measures were applied to the data in which the "don't know" responses were both included and excluded in the analysis. How the midpoint category was treated affected the outcome of significance tests, factor analysis, and Gutman scaling.

IV. Physiology and psychology of reading

IV-1 Physiology of reading

RICHARDSON, JOHN T. E., & FIRLEJ, MAUREEN D. E. Laterality and reading attainment. *Cortex*, December 1979, *15*, 581–595.

Correlates performance on measures of laterality with reading and spelling achievement. Tests administered included the *Harris Tests of Lateral Dominance*, a dichotic listening task a tachistoscopic letter recognition task, the *Schonell Graded Reading Test*, and the *Schonell Graded Spelling Test*. Raw scores from the latter two tests were used instead of normed reading ages. Subjects were 131 boys in the first three years of an English public school. Their CAs ranged from 10-11 to 15-11. The results of factor analyses and multiple regression analyses found that none of the laterality variables was significantly correlated with reading achievement and that only one laterality measure was related to spelling achievement: hand preference/visual dominance. Boys consistent in hand and eye preference were superior in spelling. The authors conclude that there is no evidence that left handedness, right cerebral dominance, or inconsistencies in laterality are correlated with reading.

JONES, REBECCA K., & LEE, DAVID N. Why two eyes are better than one: the two views of binocular vision. *Journal of Experimental Psychology: Human Perception and Performance*, February 1981, *7*, 30–40.

Compares binocular and monocular vision in a variety of exteroceptive and visuomotor tasks in 10 experiments. There were five or ten adults in each experiment, with some participating in more than one. The tasks of the 10 experiments were letter identification, detection of camouflaged octopuses, color discrimination, bead threading using TV, target tracking with a TV, control of stance, needle threading, water pouring, reaching with hand visible, and reaching with hand invisible. In all the experiments, two-eyed performance was significantly superior to one-eyed performance. The authors conclude that the binocular system is able to detect the matching information and to use that information to increase visual efficiency. Stereopsis was not found important in certain tasks in which subjects could move their heads. The authors indicate that this means that an important ecological benefit of binocular frontal vision is having binocular concordance, rather than having binocular disparity.

RAYNER, KEITH, & BERTERA, JAMES H. Reading without a fovea. *Science*, October 1979, *206*, 468–469.

Analyzes the importance of foveal and parafoveal vision in reading. Two experiments were conducted, with the same four individuals participating in both. Subjects had normal uncorrected vision and practiced with the visual equipment used in the study before the experiments started. In Experiment 1, foveal vision and parafoveal vision were masked. A computer tracked the saccades, and adjusted the mask two to ten msecs. after fixation. Phenomenologically, the mask moved in perfect harmony with the eye. The stimuli were sentences displayed on a CRT. The mask covered one to seventeen letters in foveal and parafoveal vision. In Experiment 2, a mask covered the sentence (in parafoveal and peripheral vision) except for a window area which allowed subjects to see one to nine or more letters. The windows were constructed by the computer in the same manner as the mask in Experiment 1. As mask size increased, reading became more difficult as measured by number and length of fixations, saccade length (number of characters), and reading errors, although errors did not become significant until the mask covered five to seven letters. The reading errors indicated that subjects were obtaining information about beginning letters of words in parafoveal vision, as well as word shape and word length. As the window size increased, reading became easier, as measured by number and length of fixations,

reading rate, and saccade length. Masking the fovea resulted in more severe reading problems than masking the parafovea. The authors conclude that information necessary for semantic identification is obtained from the foveal and near parafoveal region, whereas other more gross types of information are obtained from the parafovea.

RAYNER, KEITH; WELL, ARNOLD D.; & POLLATSEK, ALEXANDER. Asymmetry of the effective visual field in reading. *Perception & Psychophysics*, June 1980, *27*, 537–544.

Examines the area of useful vision in reading, particularly the area to the left of the fixation. Subjects in the three reported experiments were 7, 9, and 14 adults, respectively. Eye movements were recorded as subjects read from a computer controlled cathode ray tube (CRT). Amount of information available to the left and right of the fixation point was varied. The first two experiments demonstrated that readers did not obtain useful information during a fixation more than three or four letters to the left of their fixation point. In the third experiment, the findings indicated that the effective visual field does not extend any further to the left than the beginning of the word currently fixated, independent of the number of letters available to the left of the fixation point. Previous research is cited which indicates that the effective visual field extends about 15 characters to the right of the fixation point.

MCCLELLAND, JAMES L., & O'REGAN, J.K. Expectations increase the benefit derived from parafoveal visual information in reading words aloud. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 634–644.

Investigates in two experiments whether a priori expectations and context increase the benefit subjects gain from a preview of a word in a parafoveal vision. Subjects in Experiments 1 and 2 were, respectively, six and twelve college students. In both experiments, stimuli were presented on an oscilloscope and the dependent variable was response time to naming the target word. All previews were presented in right or left parafoveal vision. In Experiment 1, subjects fixated on a point on the screen and saw one of six previews (various shapes and non-words varying in degree of visual similarity to the target word), after which the target word was exposed. Eight of the 392 words had been taught earlier and subjects were told to expect these words in the experiment (constrained). Procedures were similar in Experiment 2, but the materials differed. Subjects previewed a sentence with the final word (target) deleted. The sentences provided neutral, weak or strong context for the target word. When there was no constraint on which word would be shown, the preview had little effect on the time required to name the foveal presentation of the target word. However, when the target was chosen from a constrained set of eight words seen repeatedly by the subject, the preview was facilitating. Likewise, when constraints were generated by preceding context, the preview again produced a large naming facilitation. Interestingly, a weak context, which by itself was insufficient to facilitate performance, nevertheless was sufficient to increase the size of the preview benefit effect.

RAYNER, KEITH; INHOFF, ALBRECHT WERNER; MORRISON, ROBERT E.; SLOWIACZEK, MARIA L.; & BERTERA, JAMES H. Masking of foveal and parafoveal vision during eye fixations in reading. *Journal of Experimental Psychology: Human Perception and Performance*, February 1981, *7*, 167–179.

Reports the results of three experiments in which six adults read a series of sentences and then reported the sentence verbatim. As subjects read, a window or visual mask was moved across the text in synchrony with the reader's eye movements. The size of the mask was varied so that either information in foveal or parafoveal vision was masked on each fixation. In one of the experiments, the onset of the mask

was delayed for a period of time following the end of the saccade. The results indicated that subjects had considerable difficulty in correctly identifying words in sentences when the mask which moved in synchrony with the eye was thirteen characters or larger. Errors made in reporting such sentences tended to be visually rather than semantically similar to the information available beyond the mask. Errors maintained the beginning and end letters and were similar in word-shape and word-length. The findings thus point out the importance of foveal and parafoveal vision for reading. The results also suggest that most of the visual information necessary for reading can be acquired during the first 50 msec. that information is available during an eye fixation.

SALTHOUSE, TIMOTHY A.; ELLIS, CECIL L.; DIENER, DONALD C.; & SOMBERG, BENJAMIN L. Stimulus processing during eye fixations. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 611–623.

Examines the discrepancy between the amount of time required to process printed stimuli (about 100–150 msec.) and the amount of time that usually elapses between saccadic eye movements (about 300 msec.). Subjects of the three experiments conducted were adults, two in the first, and the same six in both Experiments 2 and 3. Stimuli were presented on a cathode-ray tube. In Experiment 1, the stimuli were two letters. Subjects fixated on the word "ready," which was then replaced by an asterisk for one second. When this disappeared, the subject moved his eyes 10° to the target location marked by another asterisk. After fixating as short a time as possible, the subject moved his eyes another 10° to a third asterisk. At specified times between the first asterisk and the last, the stimuli flashed for 40 msec. Subjects then indicated which letter was shown. In Experiments 2 and 3, stimuli were < and > and single digits. The procedures were similar to Experiment 1, except the span of the sweep was 6°. In Experiment 1, all segments of the fixation were equally effective at mediating stimulus identification. This finding rejects the hypothesis that saccadic suppression reduces the functional duration of fixation. In Experiments 2 and 3 a change in the fixated stimulus increased fixation duration at temporal intervals in which identification accuracy was asymptotic. This result was interpreted as indicating that higher level processing of a visual stimulus continues for 100–200 msec. after it has been initially registered in the nervous systems.

DUDA, PETER D., & KIRBY, HUGH W. Effects of eye-movement controls and frequency levels on accuracy of word recognition. *Perceptual and Motor Skills*, June 1980, *50*, 979–985.

Examines the effects of using verbal and spatial types of fixation stimuli upon the accuracy of 40 undergraduate students' word recognition for low- and high-frequency nouns presented bilaterally to the left and right visual fields. Pairs of four letter concrete nouns were presented simultaneously to homologous areas of the two visual fields. A given noun appeared twice, once in the right and once in the left visual field, paired each time with a different noun. Subjects were asked to identify first a fixation stimulus and then the word items as well as their locations to the left or right of fixation. Half of the subjects used verbal identification and half were required to use a manual response. The number of words and letters correctly identified in a visual half-field by a subject was converted to a percentage correct score. The superiority of word recognition in the right visual field was found to be independent of the type of fixation stimulus used to control eye movements. Manual and verbal modes used to identify fixation items showed comparable rates of recognition. Different frequency pairings of bilaterally presented words influenced the degree of the superiority of the right visual field-left hemisphere. Overall recognition was found better when a high frequency noun was located in the right visual field during bilateral presentation.

WALKER, JAMES L., & KENNEDY, HOLLY J. Effects of differences in eyeblink frequency during television viewing and reading on Delta EEG. *Perceptual and Motor Skills*, October 1980, *51*, 446.

Reports the serendipitous observations of eye blinks during reading and television viewing that were made during another experiment designed to measure EEG differences between reading and TV viewing. There were significantly more eye blinks while viewing TV than when reading. Concludes that researchers should be cautious when editing EEG epochs occurring simultaneously with eyeblinks, especially for slower EEG frequency bands.

IV-2 Sex differences

DAY, H. D.; DAY, KAAREN C.; HOLLINGSWORTH, SHIRLEY; & MCCLELLAND, DEE K. Sex differences in orthographic linguistic awareness. *Illinois Reading Council Journal*, October 1980, *8*, 21–28.

Examines the differences in orthographic linguistic awareness in four- and five-year-old girls and boys, and traces developmental changes in this behavior through first grade. The *Concepts About Print* test (CAP) was administered to two samples of 70 boys and 59 girls in day care centers and a sample of 29 boys and 27 girls in kindergarten. Children in the third sample were given the CAP three times during their kindergarten year and twice during grade one. Results indicate significantly superior total CAP scores for girls. Greatest initial differences favored girls in print-direction and letter-word concepts. Developmental findings imply boys acquire print related concepts later than girls.

FUCHS, LUCY. Sex differences in reading. *The New England Reading Association Journal*, 1980, *15*, 11–14.

Discusses the apparent reasons that boys have more reading problems than girls. The topics of maturation, cultural differences, textbooks, and sexism are discussed. The author concludes that while the research shows that boys tend to lag behind girls in reading during the elementary years, they are not permanently damaged by it in that boys do catch up later.

YARBOROUGH, BETTY H., & JOHNSON, ROGER A. A six-year study of sex differences in intellectual functioning, reading language arts achievement, and affective development. *The Journal of Psychology*, September 1980, *106* (1st Half), 55–61.

Examines sex differences on three measures of intelligence, four measures of achievement, and 20 measures of affect for 52 female and 42 male seventh graders who had been matched at first grade on age, SES, readiness, and intelligence. The matching at school entrance was based on Hollingshead's SES classification, scores on the *Metropolitan Readiness Test*, and *Kuhlman-Anderson Test IQs. At the end of six years of schooling, children were administered: the Kuhlman-Anderson Test*; the *Cognitive Abilities Test* (verbal and nonverbal); the *SRA Achievement Series* (reading comprehension, vocabulary, language arts and spelling); the *California Test of Personality* (self reliance and total adjustment); the *Nowicki-Strickland Scale* (locus of control); the *Self-Social Symbols Task* (measures several self-concept variables); and measures of attitude by the *Semantic Differential Technique*. Attrition rates were not reported. Boys and girls did not differ on IQ, verbal thinking, nonverbal thinking, reading comprehension or vocabulary. Girls exceeded boys on measures of language arts and spelling, three measures of self concept, and four measures of attitude. It is suggested that the superior language arts and spelling achievement of girls may have contributed to the widespread belief that girls are better readers.

KAUFMAN, NADEEN L. Differential validity of reversal errors as predictors of first-grade reading achievement for blacks and whites. *Psychology in the Schools*, October 1980, *17*, 460–465.

Explores race and sex differences on a measure of reversal and sequencing errors for a group of 401 first-grade children. Differences were examined in two ways: comparisons of mean scores on the *Horst Reversals Test*, and comparisons of the predictive validity coefficients of this reversals measure. About 70% of the black pupils had parents in semiskilled or unskilled occupations, whereas only 30% of the white pupils had parents in these occupational categories. School achievement was assessed with the *Metropolitan Achievement Tests* or the *Metropolitan Reading Readiness Tests*. White children scored significantly higher than black children on the reversals test, although predictive validity coefficients were substantial (.50s - .60s) for both races. Sex differences tended to be minor and of little consequence.

PRAWAT, RICHARD S., & JARVIS, ROBERT. Gender difference as a factor in teachers' perceptions of students. *Journal of Educational Psychology*, December 1980, *72*, 743–749.

Examines the influence of pupil sex, reading achievement, and IQ on teachers' perceptions of their pupils' behavior. Multiple regression analyses utilizing the responses of 12 female teachers of a small midwestern elementary school were reported in which the dependent variables were scale scores on the *School Behavior Check List* (SBCC). The results of the *Slosson Oral Reading Test* and the *Otis Lennon Mental Ability Test* for two classrooms of pupils at each of grades one through six (N = 284) served as the independent variables. Tabular data presents the intercorrelations among scales of the behavior checklist, mean raw scores of teachers' ratings for males and females on the six scales, and the multiple correlations of SBCC scale score with sex, IQ, reading and grade level. Among the varied findings, pupil gender accounted for significant variance for ratings aggression ($p < .01$), low need achievement ($p < .01$) and academic disability ($p < .05$). However, results indicate that reading scores and IQ may be more potent factors on teacher perceptions than gender, as such.

IV-3 Intellectual abilities and reading

ROGERS, BRUCE G.; WILSON, BARRY J.; & HEWETT, GILBERT. Canonical variates in longitudinal achievement data. *Psychology in the Schools*, October 1980, *17*, 496–499.

Employs the multivariate procedure of canonical analyses to correlate performance on primary grade academic ability tests to performance on an achievement test administered in the middle grades. Data from two sets (groups 1, N = 313, and 2, N = 336) of sixth graders who attended school in contiguous years were collected from cumulative records and were analyzed separately for purposes of replication. Both groups were administered the *Primary Mental Abilities Test* in first grade. The average scores were 109 and 104. In fifth grade, the average IQ for both groups on the *Kuhlman-Anderson Intelligence Test* was 112. The tests administered in the primary grades were: The *Metropolitan Readiness Test* in kindergarten, the *Primary Mental Abilities Test* in first grade and the *Otis-Lennon Mental Ability Test* in third grade. The middle grades test was the *Iowa Tests of Basic SKills* (ITBS) (four subtests) administered in both fourth and sixth grades. Canonical correlation coefficients were calculated between the set of primary test scores and the set of ITBS subtests. The canonical correlation coefficients for fourth grade achievement for groups 1 and 2 were .78 and .79, and for sixth grade achievement, they were .76 and .78. The authors conclude that the canonical correlation coefficients and canonical loadings indicate that one single factor accounts for 60% of the overlap in variance of the primary and middle grade data sets. That factor was labeled general scholastic ability.

NAGLIERI, JACK A. McCarthy and WISC-R correlations with WRAT achievement scores. *Perceptual and Motor Skills*, October 1980, *51*, 392-394.

Explores the relationship between performance on the McCarthy *General Cognitive Index* and *WISC-R* Full Scale IQ with the *Wide Range Achievement Test* (WRAT) reading scores. Twenty educable mentally retarded (M age = 7-10) and 20 learning disabled (M age = 8-1) children were studied. WRAT scores did not correlate significantly with the WISC-R and McCarthy scores for the retarded sample, while significant correlations (.63 and .56 respectively) were found for the learning disabled group.

SEWELL, TREVOR E.; PALMO, ARTIS J.; & MANNI, JOHN L. High schoo dropout. Psychological, academic, and vocational factors. *Urban Education*, April 1981, *16*(1), 65-76.

Reports the performance of 32 male and 33 female high school dropouts on an extensive assessment of aptitude, vocational, and personality instruments. Performance of dropouts is compared to test norms. Relative contribution of selected variables to academic achievement of the subjects while enrolled in a career awareness program is determined. Measures included the *WAIS*, *Raven's Progressive Matrices*, Paired-Associate Tests, *Tennessee Self-Concept Scale*, *Intellectual Achievement Responsibility Questionnaire*, *Baron's Reinforcement History Questionnaire*, the Reading and Arithmetic tests of the *Wide Range Achievement Test*, *Gates-MacGinitie Reading Test*, the *Differential Aptitude Test*, and the Attitude Scale of the *Career Maturity Inventory*. A table of intercorrelation coefficients among the 15 variables is presented. Analysis of multiple regression revealed IQ to be the only variable making a significant contribution to reading achievement. IQ and self-concept contributed significantly to arithmetic achievement. Weak and nonsignificant relationships were evidenced among social, personality, vocational, and achievement variables. The multiple Rs for all predictor variables on reading and arithmetic were .531 and .520, respectively. The mean performance of dropouts fell below that of the norm population on measures of intelligence, self-concept and vocational maturity.

RYCKMAN, DAVID B. Reading achievement, IQ, and simultaneous-successive processing among normal and learning-disabled children. *The Alberta Journal of Educational Research*, March 1981, *27*, 74-83.

Examines the relationship between reading achievement and simultaneous-successive processing for 102 learning disabled (LD) children and 99 normal children. The two samples were approximately matched in sex and age, with the average CA being 10-4. The average IQ of the LD group on the *Peabody Picture Vocabulary Test* was 105; for the normal group, it was 115. To measure simultaneous, successive and speed factors, all children were administered *Raven's Colored Progressive Matrices*, the *Children's Embedded Figures Test*, the *Seashore Rhythms*, the *Seashore Tonal Memory*, *The Wepman Auditory Discrimination Test*, the Ryckman adaptation of the Auditory Discrimination Test, matching familiar figures, detail matching figures, global matching figures, and the *Gates MacGinitie Reading Test*. Factor analyses resulted in three factors with eigenvalues greater than one. These three factors were identified as representing speed, simultaneous processing, and successive processing. The speed factor was not significantly correlated with reading or IQ, but the simultaneous and successive factors were. The author concluded that simultaneous and successive processing are important components in reading achievement for both LD and normal children.

BLOOM, ALLAN; WAGNER, MARCELLA; RESKIN, LARRY; & BERGMAN, ANNA. "A Comparison of Intellectually Delayed and Primary Reading Disabled

Children on Measures of Intelligence and Achievement." *Journal of Clinical Psychology*, July, 1980, *36* 788–790.

Compares the reading subtest scores on the *Woodcock Reading Mastery Tests* to the difference between Verbal and Performance scores on the WISC-R of 32 primary disabled readers and 32 mildly mentally retarded children. The two groups were matched on age (9.8 years), sex (23 boys and 9 girls) and Total Reading Achievement Index on the Woodcock. The average full scale IQs of the retarded pupils was 75, and for the reading disabled children it was 97. Though both groups had 10 to 12 point differences between their Verbal and Performance scores, there was no significant difference in the degree of difference, nor was there a difference in the direction of the difference between Verbal and Performance scores. On the five subtests of the Woodcock, the two groups differed only on the Letter Identification subtest, but for both groups the scores on all subtests were in the same rank order. The authors concluded that while standard psycho-educational test results may help define a child's areas of strengths and limitations, more specific evaluation of the child's cognitive skills is necessary.

Beers, Carol S. the relationship of cognitive development to spelling and reading abilities. In Edmund H. Henderson and James W. Beers (Eds.) *Developmental and cognitive aspects of learning to spell: A Reflection of Word Knowledge*. Newark, Delaware: International Reading Association, 1980, 74–84.

Examines the relationship between a cognitive development task and reading and spelling abilities of 116 second graders (65 boys and 51 girls). All children were administered three tests: The *Concept Assessment Kit-Conservation* (a standardized test which measures conservation of: number, substance, continuous quantity, weight, discontinuous quantity and area); a spelling test with six categories of words: short *a*, short *e*, short *i*, long *a*, long *e*, and long *i*; and the *Gates MacGinitie Reading Test*, Primary B. IQs were also obtained, but their source was not reported. Correlation coefficients ranged as follows: reading and conservation, .09 to .35; spelling and conservation, −.08 to +.33; IQ and reading, .13 and .12; IQ and conservation, .01 to .13; and IQ and spelling, −.11 to +.12. In a stepwise multiple regression, the same three variables significantly contributed to the prediction of reading vocabulary (Mult. R = .605) and to reading comprehension (Mult. R. = .594): spelling of long *e* words, total conservation, and spelling of long *a* words.

Hicks, Concetta G. The development of creative thinking and its relationship to IQ and reading achievement. *Reading World*, October 1980, *20*, 44–52.

Studies the influence of a treatment program upon the development of creative thinking abilities of 23 fourth-grade pupils, 8 boys and 15 girls, comprising a heterogeneously grouped, self-contained class. A second purpose was to examine relationships obtaining between creative thinking, reading, and I.Q. The training program consisted of 20 minute sessions, three days per week, for eight weeks. Activities of the program involved group brainstorming, small group discussion, and individual written activities, all directed at stimulating flexibility, fluency, and originality in pupil response. Verbal Form A of the *Torrance Test of Creative Thinking* was used as a pre- and post-treatment measure. The *Lorge Thorndike Intelligence Test* and the *Stanford Diagnostic Reading Test* were employed to assess the other targeted variables. Significant differences ($p < .001$) occurred between the pre- and posttest measures of creativity. Correlation coefficients between I.Q. and reading and the three creativity variables also were significant ($p < .05$) and ranged between .46 and .58 for posttest creativity scores with total reading. Notably and significantly higher differential r's favoring inferential over literal reading scores for correlation with creativity scores were found.

KENNY, KEVIN, & KLING, MARTIN. Individual differences and the gifted reader. *The Reading Instruction Journal*, Winter 1981, *24*, 24–30.

Summarizes key generalizations about educating the gifted reader. The major topics discussed are: individual differences, the nature of the gifted student, identifying the gifted reader, and problems and issues in educating the gifted reader. The authors end with three conclusions about and implications for the gifted: 1) Research generating usable and reliable data is needed. 2) Merely identifying, classifying, and depositing a student in a gifted classroom is ineffective. Real changes in the implementation of programs and growth in reading ability of the gifted will occur only as qualified teachers address themselves to the appropriate problems of the gifted reader. 3) The general goals for the gifted reader are not different inherently from those for other students.

MERVIS, CAROLYN B. Category structure and the development of categorization. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 279–307.

Discusses the structure of categories and the development of the processes of categorization with regard to concrete objects. Begins with a section on the two major theories of categorization (traditional and best-example); then presents a discussion of the developmental aspects of categorization; and concludes with implications of categorization theory, with special emphasis on implications for constructing children's readers.

IV-4 Modes of learning

GREEN, RUTH. Remembering ideas from text: the effect of modality of presentation. *The British Journal of Educational Psychology*, February 1981, *51*, 83–89.

Compares recall after reading with recall after listening. Forty-eight 16- and 17-year olds were randomly assigned to two recall conditions (immediate and two hour delay) and were each given two prose passages to recall, one after reading, the other after listening. The passages were judged to be difficult in content and unfamiliar. An incidental recall procedure was adopted. Recall protocols were scored for the presence of idea units, content units, relationship units, and number of units at each level of the content structure. Number of errors was scored independently. Results demonstrated the superiority of recall after reading, both in terms of total units recalled and in number of errors. There were no significant differences between immediate and delayed recall scores.

HAUSFELD, STEVEN. Speeded reading and listening comprehension for easy and difficult materials. *Journal of Educational Psychology*, June 1981, *73*, 312–319.

Compares comprehension for speeded reading and for listening to compressed speech for 30 Australian college students, 15 assigned to reading and 15 assigned to the listening group. Each group was presented with three easy and three difficult passages, with one passage at each difficulty level presented at each of three speeds: 180, 290, and 380 words per minute. Reading speed was controlled by an SRA Reading Accelerator and listening passages were presented on a Varispeech compressed speech recorder. Comprehension was assessed by five written questions for each of the six passages. No difference between reading and listening comprehension levels or quality

was found at any of the speeds or difficulty levels. However, subjects did comprehend better easy materials and materials at slower rates in both modalities. Reading and listening comprehension were related to subjects' habitual reading speeds. There was evidence of a working-memory processing limit of about 275 words per minute.

WILKINSON, ALEX CHERRY. Children's understanding in reading and listening. *Journal of Educational Psychology*, August 1980, *72*, 561–574.

Compares answers to three kinds of comprehension questions when elementary-level pupils read aloud with answers given when texts were read to them while they followed the texts. In the first experiment, 157 children in grades 2 through 6 read selections prepared with vocabularies about second grade, then were asked four "Who" questions, two types of "When" questions (recall of events and sequence), and "Where" questions requiring subjects to place objects in proper positions on a board. Four alternate texts for each of the three types of questions were counterbalanced permitting 24 possible permutations. Data were analyzed using the proportion of items correctly recalled or recognized in the two modes, and the logarithm of a ratio of speeds of each pupil's oral reading to those of the examiners. No reliable sex differences were found but small interaction of sex and mode of presentation appeared. Reliable differences appeared for both the "When" and "Where" questions. Understanding increased with grade in school, the sums of squares associated with a linear trend. The proportion correct was somewhat greater when pupils listened than when they read and a significant interaction among mode, grade, and question was found. Further analysis suggested a three-stage model of the development of skilled reading. To explore further, a second experiment involved 150 children in grade 5 with normal or superior reading achievement. Only the "When" test was used for six passages, counterbalanced between oral reading and listening without seeing the text, and reading speed was recorded. Analysis of variance of proportions of correct answers revealed significantly higher scores in listening than in reading. The log ratios, as in Experiment 1, showed that as reading rate accelerated, relative to listening rate, levels of comprehension and memory decelerated relative to levels in listening. A multiple regression and partial correlation after adjusting for reading achievement, showed that the accuracy of events questions declined as rate of reading increased but accuracy of sequence questions remained constant.

DUNN, RITA, & CARBO, MARIE. Modalities: an open letter to Walter Barbe, Michael Milone, and Raymond Swassing. *Educational Leadership*, February 1981, *38*, 381–382.

Comments on an article which argued that is is important to teach students through their perceptual strengths. A list of eight studies which support the contention that increased achievement occurs when pupils are taught through their identified perceptual preferences is presented.

BARBE, WALTER B., & MILONE, JR., MICHAEL N. What we know about modality strengths. *Educational Leadership*, February 1981, *38*, 378–380.

Discusses several research studies which indicate that students have different modality strengths that should be used to improve learning. Particular attention is paid to summarizing the results of a previous study by the authors. Implications for education are presented. The authors point out that student modality strengths should be considered in such areas as instructional planning, designing the physical plant, and developing media and materials. It is noted, too, that teachers and supervisory personnel need to be aware of their own modality strengths.

KAMPWIRTH, THOMAS J. Not just another fish story: a response to Barbe, Swassing and Milone. *Academic Theory*, January 1981, *16*, 267–269.

Responds to Barbe, Swassing, and Milone's arguments about the value of teaching reading to children by their preferred modality. The author argues that he agrees with Barbe and his co-authors and hopes that they are correct, but acknowledges that results of numerous studies simply do not support the validity of such modality matching.

BARBE, WALTER B.; SWASSING, RAYMOND H.; MILONE, MICHAEL N.; & KAMPWIRTH, THOMAS J. A forum: modality strengths. *Academic Therapy*, January 1981, *16*, 261–266.

Includes a paper reviewing the literature on teaching to modality strengths and a reply to that article. In the first paper, the authors' thesis is that rejecting modality-based instruction is premature. Cites research which suggests why this is so.

PEZDEK, KATHY. Life-span differences in semantic integration of pictures and sentences in memory. *Child Development*, September 1980, *51*, 720–729.

Attempts to identify whether relevant information, presented in two different modalities, is integrated in memory across different age groups. A spaced cross-sectional longitudinal sample (45 third graders, 45 sixth graders, 45 high school seniors, and 30 adult volunteers over age 60 was employed in a task requiring subjects to make same-different choices of cross-modality, semantic relevant-irrelevant associations between an original stimulus of 24 pictures and verbal sets followed by 24 intervening and confounding items. The results, with varied significance at the $p < .05$ to $< .10$ levels suggest that sixth graders and high schoolers, in contrast to the third graders and older subjects, were able to achieve spontaneous, cross-modal semantic integration. Increasing temporal delay from five minutes to one day decreased response sensitivity but did not alter result patterns.

PRICE, GARY E.; DUNN, RITA; & SANDERS, WILLIAM. Reading achievement and learning style characteristics. *The Clearing House*, January 1981, *54*, 223–226.

Employs a discriminant analysis using reading as measured by the *New York State PEP* test as the discriminant and variables identified on the Dunn and Price *Learning Style Inventory* as predictors. Subjects consisted of 13 grade three and 72 grade six pupils from New York City schools. Eleven variables were found to discriminate between subjects with high and low PEP reading scores: better readers had greater self-motivation, persistence, responsibility, preference for formal study environment, and need for mobility, but less preference for tactile-kinesthetic experience, late morning functions, or need for food intake while studying.

IV-5 Experiments in learning

CAZDEN, COURTNEY, B. Learning to read in classroom interaction. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *3*, 295–306.

Reviews research based on observational studies of classroom reading instruction. In particular, the review is on time on task and focus of attention. The author raises questions to pursue and notes that research is needed that would investigate the effect of different organizations and combinations of reading events on both quantity of time children spend on task and the qualitative aspects of foci of attention of teachers and pupils.

GOODMAN, YETTA M. The roots of literacy. In Malcolm P. Douglass (Ed.) *Claremont Reaqding Conference Forty-Fourth Yearbook*, 1980, 1–32.

Examines how children develop the concepts of graphophonic, syntactic and semantic cueing systems; when children actually begin to learn to read; and the impact of home, community and environment on learning to read. The author argues that to answer these questions, one must not look only at reading, but must also examine listening and speaking. Literacy, the author argues, has five roots, and these roots are greatly influenced by their environment. The first root is the development of print awareness in situational contexts. The environment the world around is packed with printed matter (e.g., signs, trademarks, cereal boxes) and at a very young age (18 months) children begin to respond to these materials. The second root is the development of print awareness in connected discourse. How children become aware of printed messages in books, newspapers, notes, magazines, and other materials is discussed. Root three is the development of the functions and forms of writing. The progression from scribbling to alphabetic writing, awareness of directionality, and development of spelling is traced. Root four is the use of oral language to talk about written language. The fifth root is metacognitive and metalinguistic awareness about written language. The discussion of this root focuses upon the ability to understand and explain the process of language itself. The author cited her own and other research in building her statement.

HIEBERT, ELFRIEDA H. Developmental patterns and interrelationships of preschool children's print awareness. *Reading Research Quarterly*, 1981, *16*, 236–260.

Examines patterns and interrelations in the development of print awareness over the preschool years. Preschool children were tested on three conventional reading readiness measures and two concepts of reading measures. Sixty children were selected from a middle-class preschool and a middle-class daycare center, with equal numbers of three-, four-, and five-year olds. Mean CAs of the three groups were 3-7, 4-5, and 5-3. The traditional readiness measures were abbreviated versions of 1) the visual discrimination and 2) the auditory discrimination tests of the *Prereading Skills tests* and 3) a 26-item, lower-case letter naming task. The two concept measures were designed for this study. They were measures of 1) knowledge about the processes involved in using print and 2) knowledge about the purposes of print. While three-year-olds did indicate some proficiency on all five measures, knowledge and performance increased significantly from three- to four and four- to five-year-olds. A factor analysis of the data yielded only one factor, thus indicating considerable unity among the five skills and concepts tested. A scalogram analysis did not yield a fixed order of acquisition of skills. The author concludes that preschool children simultaneously acquire general and specific information about print.

TEMPLETON, SHANE, & SPIVEY, EDWINNA M. The concept of word in young children as a function of level of cognitive development. *Research in the Teaching of English*, October 1980, *14*, 265–278.

Investigates the development of the concept of word in young children varying in Piaget's levels of cognitive development. Subjects were six pupils randomly selected from each of four levels: preschool, kindergarten, first grade, and second grade. Children ranged in age from 4-0 to 7-8. Word awareness was assessed by a seven-item interview. As part of the interview, the child listened to three-word phrases, single nouns, single verbs and single functors and was asked if these were words. Other questions required children to define "word" and to provide a long, short, difficult, and easy word. Cognitive level (preoperational, transitional, concrete operational) was assessed by classification and seriation tasks. In general, preoperational children (N = 8) were unable to discuss language abstractly. Most responses were "don't know" or "no response." When they did respond, they usually equated words with speech. Transitional children (N = 12) did respond the majority of the time, and, though many of their responses equated words with speech, some responses included references to

letters and spelling. Concrete operational children (N = 4) frequently included in their responses references to print or the word's role as a part of a sentence.

GUTTENTAG, ROBERT E., & HAITH, MARSHALL M. A longitudinal study of word processing by first-grade children. *Journal of Educational Psychology*, October 1980, *72*, 701–705.

Traces the development of word processing skills during first grade and examines the relation between ability to read words rapidly and the ability to process letters automatically. Each of the 12 first-grade suburban pupils was tested in November, March, and again in May. Stimuli were three pictures (line drawings) of items for each of three categories (animals, furniture, and modes of transportation) and three sets of 16 words selected from various first grade basals. Inside each picture were one of four classes of to-be-ignored character strings: nonletter strings, nonword letter strings, extracategory words, and intracategory words. Reaction time (RT) to word and picture identification was the dependent variable. There were significant increases in rate of reading words from testing 1 to 2 and testing 2 to 3. Nonword letter strings marginally inhibited picture RTs more than noletter strings at testing 1 and inhibited them significantly more at testings 2 and 3. The authors suggest that this is evidence for automatic letter processing beginning as early as November of first grade. There was no significant differences in the interference effects of extracategory and intracategory words at testings 1 and 2, but there was at testing 3. In sum, children were able to process letters automatically early in the first year of reading instruction and were able to extract meaning automatically from familiar printed words by the end of the first grade.

STONE, DAVID E., & GLOCK, MARVIN D. How do young adults read directions with and without pictures? *Journal of Educational Psychology*, June 1981, *73*, 419–426.

Compares the performance of college undergraduates on assembly tasks under differing directional sets. In phase one of the study, 59 volunteers were assigned randomly and independently to a model construction task as aided by illustrations without text or by illustrations with text. In a second phase, 31 additional subjects performed with written directions only. Reading comprehension was operationally defined as accuracy of psychomotor performance on the task. Performance was videotaped and analyzed through monitoring. Sixty subjects made errors in completing the assembly task. Statistical treatment of results indicated that subjects aided by written directions plus illustrations made significantly fewer errors than subjects operating from written directions only or from illustrations alone ($p < .001$). No significant differences were found between performance with print directions and illustrations ($p < .05$). Errors by type and condition are described.

PARK, DENISE CORTIS. Item and attribute storage of pictures and words in memory. *American Journal of Psychology*, December 1980, *93*, 603–615.

Reports on two experiments assessing the impact of semantic, spatial, and color information on the accuracy of recall of memorized data presented in 33 acquisition slides. Subjects were 80 and 48 college students. Main effects of acquisition format were noted which imply superiority of pictures or words ($p < .001$ and $p < .02$). Main effects of distractor type occurred ($p < .001$) which indicated that semantic changes were best discriminated while spatial changes were discriminated better than color changes.

SCHALLERT, DIANE LEMMONIER. The role of illustrations in reading comprehension. In Rand J. Spiro, Bertram C. Bruce, William F. Brewer (Eds.)

Theoretical Issues in Reading Comprehension. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 503-524.

Examines the evidence for and against the effects of pictures in reading text. First identifies the dichotomy between the effects of pictures on teaching children words or how printed symbols can be decoded and the effects of pictures on learning from text, then discusses research on four topics: research not supporting the use of pictures, studies critical of research not supporting the use of pictures, research supporting the use of pictures, and studies related to the role of imagery as it relates to the value of pictures. The author concludes that the existing evidence supports the use of illustrations and also suggests situations in which illustrations may be particularly beneficial.

BRODY, PHILIP J. Research on pictures in instructional tests: the need for a broadened perspective. *Educational Communication and Technology Journal*, Summer 1981, *29*, 93-100.

Reviews critically selected research on the effects of pictorial illustrations on learning from texts. The author notes that while there has been considerable research on the effect of illustrations on learning to read, there has been little on the effect of illustrations on learning from reading. Previous research reviews have failed to distinguish between the two. The author makes a number of suggestions for needed research in the area.

DUCHASTEL, PHILIPPE C. Research on illustrations in text: issues and perspectives. *Educational Communication and Technology Journal*, Winter 1980, *28*(4), 283-287.

Reviews selected studies of the effects of illustrations in texts. A number of issues in pictorial research are identified and commented upon. It is noted that the effects of pictures must be considered in three separate domains: comprehension, recall, and motivation. The author argues that though there have been conflicting results regarding the instructional value of illustrations in texts, there have been enough positive findings to support the intuitive belief that they are valuable. Various research frameworks for examining the reasons illustrations can aid learning are discussed.

DUCHASTEL, PHILIPPE C. Illustrations in text: a retentional role. *Programmed Learning & Educational Technology*, January 1981, *18*(1), 11-15.

Assesses the effects of illustrations in text on reading comprehension. Comprehension was assessed by immediate and delayed cued free recall tests and multiple choice comprehension questions (topical recall). The 77 fourth-form students involved (CA 14 or 15) were assigned to one of four groups: illustrated text, immediate recall; illustrated text, delayed recall (two weeks later); nonillustrated text, immediate recall; nonillustrated text, delayed recall. The reading passage was 1700 words and 12 paragraphs, each paragraph presenting an aspect about the life of Queen Victoria. Six of the topics' paragraphs were illustrated and six were not. There was no main effect for illustrations for either topical or cued recalled tests. There was no significant interaction between illustrations and time of testing for the topical-recall test, but there was on the total score for the cued-recall test. The findings indicated that illustrations did not assist immediate cued recall, but that they did assist delayed cued recall. However, the results were less clear-cut when only the two groups which were tested after two weeks were compared with each other.

ACKERMAN, BRIAN P. Encoding specificity in the recall of pictures and words in children and adults. *Journal of Experimental Child Psychology*, April 1981, *31*, 193-211.

Tests the hypothesis that young children and adults differ in their attention to sensory and semantic information (cues) in stimuli. There were different subjects in Experiments 1 and 2, but in both there were 36 second graders, 36 fourth graders and 36 college students. The children were from middle income, suburban Canadian communities. In Experiment 1 subjects were shown 36 pairs of cue-target words, and in Experiment 2 they were shown picture pairs. The cue and target words were related conceptually (e.g., pear-apple), acoustically (e.g., pear-bear) or not at all. The materials of Experiment 2 were similarly organized except that pictures of the words were used in place of the written word. Another difference was that the acoustically related cues were replaced by pictures that were schematically related to the target (had the same general visual outline, e.g., a pear and a bell). There were two conditions in each experiment: learn and conceptual orienting. In the learn condition, subjects were told to study the cue-target pairs in order to learn the series. In the conceptual orienting conditions, subjects were asked questions about each pair, but were not explicitly told to learn them. The recall patterns of children in the conceptual orienting condition were similar to the adult patterns in the learn condition, and the adult recall pattern in the sensory orienting condition was similar to that of children in the learn condition. The author concludes that there are developmental differences in the efficiency of processing semantic information within stimuli. Children attend to sensory aspects of stimuli, thus their recall of the stimuli suffers.

CARON, JOHN P.; JAMIESON, DONALD G.; & DEWAR, ROBERT E. Evaluating pictographs using semantic differential and classification techniques. *Ergonomics*, February 1980, *23*, 137-146.

Discusses the nature and advantages of techniques of semantic differential and general classification in assessing the meaning conveyed by public information pictographs. Three experiments are reported. In the first experiment, 62 university psychology class students examined pictographs and rated the application of a series of adjective pairs. In the second experiment, 96 university psychology students were tested for meaning match between pictographs and their verbal translations. The third experiment using 96 university psychology students as subjects included beyond experiment two conditions, those components developed through application of classification techniques in the earlier experiments. An analysis of the quantitative and qualitative findings is included. The two techniques are recommended for further research and application.

DEAN, RAYMOND S., & KULHAVY, RAYMOND W. Influence of spatial organization in prose learning. *Journal of Educational Psychology*, February 1981, *73*, 57-64.

Reports two experiments treating the influence of maps on comprehension of an extended prose passage. In the first experiment, 40 undergraduates did or did not create a map-like representation while studying a passage. The criterion test consisted of free-recall, multiple-choice, and constructed response items to assess comprehension of passage information. Differences significantly favored the map construction condition for all measures. The second experiment varied the degree to which 120 undergraduates were involved in the use of a map organizer while replicating other conditions of the first experiment. The three conditions compared were 1) forced processing with labeling of map from overhead projection, 2) self-processing with direction to study a prelabeled map, and 3) no map organizer presented with selection. Subjects in the forced processing group had significantly higher comprehension scores ($p < .001$) while the self-processing group scores were not significantly better than the no map group. Subjects scoring lower on the *Wide Range Vocabulary Test* benefited significantly more ($p < .01$) from the forced processing condition.

DANGERFIELD, TONY. Preliminary study of the suitability of science materials at CSE and O level. The *School Science Review*, March 1981, *62*, 546–548.

Attempts to determine whether students could cope with scientific materials written specifically for their age and ability range. The sample consisted of British fourth-year students studying for O level and CSE courses in physics (N= 291), chemistry (N = 197), and biology (N = 195). Students were administered three 100-word sample cloze tests taken from the beginning, middle, and final chapter of their science texts. In addition the GAPADOL, a test of general reading comprehension, and the APU, a standardized vocabulary test, were administered. Mean reading ages on the GAPADOL test were 17+ for the o-level group and 14.6 for the CSE. All cloze test scores fell below the 50% level except for the O-level group in biology (50.3%). Vocabulary test means were 82 percentile for O-level and 49 percentile for CSE level. The author felt that the specialized vocabulary of the science texts could be causing difficulties.

CRAMER, PHEBE. Imagery and learning: item recognition and associative recall. *Journal of Educational Psychology*, April 1981, *73*, 164–173.

Studies the effects of three types of imagery instructions on the single item (SI) and paired-associative (PA) learning of first and fifth graders in two experiments. Stimuli were 12 concrete nouns intermixed with 24 control words, also nouns, to create two training lists and two test lists. PA lists were constructed by pairing each of the 12 critical words with one of the 24 control words. Stimuli were presented orally on tape. The three types of imagery instructions were separate, interactive, and neutral. Separate (S) instruction taught children to create individual images in their minds for each single item words. Interactive (I) instruction taught subjects to create images for all the single items or paired-associates on the list. Neutral (N) instruction was the presentation of stimuli in the standard (undefined) manner. S instruction was used only for single items. Thus, there were five experimental conditions with eight boys and eight girls at each grade randomly assigned to each: SI-S, SI-I, PA-I, SI-N, PA-N. Learning was measured by both recognition and recall tasks. Following the learning tests, pupils were asked about their use of imagery during training tasks. Children in Experiment 2 were 84 first graders and 84 fifth graders. Procedures and materials were identical to Experiment 1 except that the number of SIs was increased to 15, the number of PAs was reduced to 10 and the three imagery conditions were used with each task, resulting in six experimental groups instead of five (added PA-S). As in previous studies, imagery instruction facilitated the learning of both SIs and PAs of older children only. Using *post hoc* procedure and comparing the learning of subjects who reported they did use imagery to those who did not indicated, however, that younger students who did use imagery did increase their learning.

BORGES, MARILYN A., & ROBINS, SHERRY L. Contextual and motivational cue effects on the comprehension and recall of prose. *Psychological Reports*, August 1980, *47*, 263–268.

Presents different introductory material (context picture appropriate, partial context picture, and no picture) combined with a character motivation story or no story condition to assess effects on the comprehension and recall of a taped prose passage by six groups of university undergraduates, 10 to each condition. Subjects who had read the motivation story rated the taped passage more comprehensible ($p < .05$) than those who did not. The picture presentation condition was significant ($p < .01$) with appropriate context picture greater than partial and both picture conditions greater than the no picture condition.

GOETZ, ERNEST T., & ARMBRUSTER, BONNIE B. Psychological correlates of text structure. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.)

Theoretical Issues in Reading Comprehension. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 201–220.

Reviews research that has investigated how variations in text structure influence the way people read, comprehend, and remember text. It is first noted that the research in this area is meager, then the research is reviewed supporting what the authors feel are the three major findings of studies of the psychological correlates of text structure: 1) text represents a higher level of psychological structure than word lists or collections of sentences, 2) certain elements of text are more important and memorable than other elements, and 3) the meaning of text is influenced by extralinguistic factors such as reader's interest, knowledge or perspective.

ADAMS, MARILYN JAGER. Failures to comprehend and levels of processing in reading. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 11–32.

Discusses and reviews research on specific problems that might beset readers and the ways these problems might affect reading comprehension. Three major problems are discussed: word recognition, syntactic processing and semantic processing.

BROWN, ANN L.; CAMPIONE, JOSEPH C.; & DAY, JEANNE D. Learning to learn: on training students to learn from texts. *Educational Researcher*, February 1981, *10*(2), 14–21.

Discusses ways to devise instructional routines to help students learn to learn, specifically, training students to learn from texts. Selected research on training students to recall text and teaching them to understand the significance of their activities is reviewed. A model for considering problems of learning from texts is presented.

MCELWEE, JOY. Children's questions and explanations: interaction in the classroom. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Fourth Yearbook*, 1980, 156–165.

Discusses the research on children's use of questions and explanations in the classroom. The author approaches this topic by relating results of studies from different methods of inquiry, including grammatical, sociological, and psycholinguistic (discourse) descriptions. The author points out the nature of questions and explanations and notes that teachers, once they understand these, can aid by promoting situations in which children use questions to inquire and answers to explain in heuristic exploration. Reading comprehension can be aided by directly involving children in these processes.

OWENS, ANTHONY M. Generative and passive questions in learning from text. *Perceptual and Motor Skills*, December 1980, *51*, 714.

Utilizes two undergraduate educational psychology classes in examining the effect of generating questions on memory for text. In the experimental group, 26 students prepared, for assigned partners, five or six multiple-choice questions on a chapter of the class textbook. The control group received no treatment. The criterion test consisted of 10 multiple-choice questions based on objectives in the text. Retention was 6.6 for experimentals and 5.4 for controls, with the difference reaching significance.

ELLIOT, STEPHEN N., & CARROLL, JAMES L. Strategies to help children remember what they read. *Reading Improvement*, Winter 1980, *17*, 272–277.

Reviews three topics in prose research that appear to have immediate applicability for facilitating pupils' memory of what they read: the manipulation of objects that represent story characters, the use of illustrations to depict the main theme of a passage, and the use of an author's passage organization. These three interventions are

discussed in the context of developing strategies for memory development. The authors note that the most promising strategies identified from research are ones which can be readily integrated into existing instructional programs.

LOOSEN, F. Memory for the gist of sentences. *Journal of Psycholinguistic Research*, January 1981, *10*(1), 17–25.

Attempts to determine the relative importance of various words in a sentence and then determines if, in a recall task, 40 university students reproduce important words more frequently than unimportant ones. Ninety sentences were constructed; 45 were considered test sentences and 45 were distractors. A volunteer group of 144 Dutch-speaking students read the sentences and either underlined the most important words or deleted the least important words, according to task. On the recall task, subjects listened to a sentence, indicated its plausibility (as a test of comprehension), and then, after a four-sentence delay, they attempted to recall the previously read sentence. During a 25-second interval between sentences, subjects were asked to repeat a numbered sequence. Reproduced words were scored as correct even when modified by such changes as plurality, tense change, and synonymous offerings. Results indicated that, at least for content words, the chance of being underlined (or not deleted) was highly correlated with the chance of being reproduced.

ANDERSON, THOMAS H. Study strategies and adjunct aids. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 483–502.

Reviews research on student generated (implicit) and adjunct (explicit) study aids. Implicit aids reviewed are note taking, underlining, elaboration and student questions. Explicit aids discussed include adjunct questions, advance organizers, test embellishments and instructional objective. The author concludes with a model of studying and an instructional model of studying text.

CHAUDHARI, U. S.; & BUDDHISAGAR, MEENA. Educational technology research: whole versus part presentation of advance organizers in text in relation to intelligence. *Educational Technology*, June 1980, *21*(6), 32–35.

Compares the effects on reading comprehension of *en masse* (whole) advanced organizers and segmented (part) advanced organizers when controlling for intelligence. The reading content of the experiment was a 16 passage article covering 16 aspects of the life of the people of Meghalaya. For each passage (approximately 100 words), a short (approximately 25 words) advance organizer was prepared. Subjects, 138 University of Indore (India) Education students, were assigned to one of three conditions: whole, in which all 16 advance organizers were presented at one time, and then subjects read the 16 passages; part, in which subjects read each organizer before reading each passage; and control, in which subjects read only the passages. Criterion was number of questions answered correctly. IQ scores were determined with the *Verbal Intelligence Test*. The language in which the passage was written was not reported. The three groups differed in intelligence. Comprehension scores did not differ significantly for the whole and part groups, but both groups comprehended significantly more than the control group. There was a significant interaction between intelligence and method: the whole method benefitting only high intelligence subjects, and the part method benefitting both groups.

ELLIS, JOHN A.; WULFECK, II, WALLACE H.; & MONTAGUE, WILLIAM E. The effect of adjunct and test question similarity on study behavior and learning in a training course. *American Educational Research Journal*, Winter 1980, *17*, 449–457.

Tests the effects of adjunct postquestions in an individualized training course. Subjects were 289 male students in an Interior Communications Technician course who had failed (scored below 90 percent) a pretest on the content. Unlike most laboratory questioning studies, the questions were part of the training materials. The materials directed students to specific questions after completing a portion of the instructional materials. To assess the effect on study behavior and learning, the percent of adjunct questions identical to the lesson and final test questions was varied in four conditions: no questions, 0%, 50%, and 100% identical. Dependent variables were a variety of measures of performance during training, and number of questions correct on the final test. The 100% group was superior on all measures, while the remaining groups differed on several measures.

ANDRE, THOMAS; MUELLER, CHARLES; WOMACK, SANDRA; SMID, KENNETH; & TUTTLE, MARK. Adjunct application questions facilitate later application, or do they? *Journal of Educational Psychology*, August 1980, *72*, 533–543.

Reports a series of seven studies that compared adjunct application to adjunct factual questions in learning from text. Studies fall into three groups: Experiments 1–3, concerned with type and position of question; Experiments 4–5, compared representation versus directed attention on the effects of questions; and Experiments 6–7, examined the effect of adjunct question difficulty. Subjects consisted of university undergraduates (N's ranging from 57 to 194), with the exception of Experiment 3 which used 87 senior high school students. In general, five of the seven studies found no significant differences between applicational and factual questions, and two studies found a superiority for factual questions.

ANDRE, THOMAS. The role of paraphrased adjunct questions in facilitating learning from prose. *Contemporary Educational Psychology*, January 1981, *6*, 22–27.

Compares the performance of 26 college undergraduates on a task of reading a 5,000-word passage. Experimental conditions were verbatim or paraphrased adjunct questions combined with the opportunity to review the text or not. All sources of variance were significant at the .01 level. Subjects did better under review and paraphrased question conditions. However, differences did not reach significance for performance on related content filler questions in post-testing.

FRIEDMAN, FRANK, & RICKARDS, JOHN P. Effect of level, review, and sequence of inserted questions on text processing. *Journal of Educational Psychology*, June 1981, *73*, 427–436.

Manipulates depth of processing of prose by inserting in text one verbatim, paraphrase, or inference question after every paragraph of a 16-paragraph, 800-word passage. Subjects were 210 college students assigned to one of 14 groups. Between subjects factors were the three levels of inserted questions. Within subject factors were: two presentation sequences (read, reread, question and read, question, reread), and two review conditions (cued review and mental review). There were also two control groups (read once control and read twice control). No questions were inserted in the control group materials. The dependent measure consisted of verbatim, paraphrase and inference questions based on three aspects of the passage: the 16 target sentences, the 16 sentences with the highest, and the 16 sentences with the lowest structural importance in each paragraph. Inference questions were superior to paraphrase questions, which were, in turn, superior to verbatim questions on test performance. Paraphrase and inference question groups exhibited superior recall of questioned material when compared with the control groups. However, only a group that received the correct answers to the inference postquestions during a review session demonstrated superior performance on criterion test items pertaining to nonquestioned material.

LADAS, HAROLD. Summarizing research: a case study. *Review of Educational Research*, Winter 1980, *50*(4), 597–624.

Presents a procedure to maximize the value of research summaries for applied use. The author argues that for an applied use a simple preponderance of evidence should be sufficient to provide a current yet tentative recommendation to the educational consumer when the results of research do not contradict common theory, change existing practice, or cost substantial amounts for adoption. A case study on note taking is uesd to illustrate the procedure. More evidence in favor of taking notes than had been previously recognized was found.

BARNETT, JERROLD, E.; DIVESTA, FRANCIS J.; & ROGOZINSKI, JAMES T. What is learned in note taking? *Journal of Educational Psychology*, April 1981, *73*, 181–192.

Describes the nature and results of two investigations of the effects of differing experimental conditions for note taking and reviewing on learning from text. Subjects of the first study consisted of 90 undergraduates who listened to an 1800-word passage on the history of roads. A 3×3×2 design was employed to compare performance for note condition (no notes, take notes, use experimenter notes), review condition (no review, review, and elaboration), and time of testing (immediate and delayed). Tests consisted of cued-recall (completion) items. Significant main effects for type of notes and time of testing were observed, and significant interaction occurred between notes and review and between notes and time of testing ($p < .05$). To explain the results of the first study, a second experiment was conducted in which 40 undergraduates listened to the taped lecture and answered questions. The conditions of "taking" and note "having" were orthogonally crossed with after lecture processing (reviewing and elaborating) and source of test questions on delayed recall (all subjects notes or own notes). Reviewing was found significantly superior to elaborating on common test items, but the main effects for note taking and the interaction of note taking with reviewing were not significant. A significant main effect was obtained for type of question; own data based items were significantly higher than review of others' items, but review of others' items was significantly superior to elaboration of others' items. Results suggest that general statements about the value of note taking must be qualified by conditions relating to type of information, amount of delay in recall, and the processing involved.

BRETZING, BURKE H., & KULHAVY, RAYMOND W. Note-taking and passage style. *Journal of Educational Psychology*, April 1981, *73*, 242–250.

Reports on a study in which high-formality and low-formality written versions of a passage were presented to 120 undergraduates who took notes for a presentation to be presented to a group of professionals or to a group of students. A third group read the passage but took no notes. A criterion analysis of idea units included in notes and in a post reading free recall written test was subjected to analysis of variance. No significant main effects or interaction were found for the several conditions where ideas selected for notes were concerned. Using results from the *Wide Range Vocabulary Test* as a covariate, and total ideas in recall as criterion, students who read low-formality passages recalled significantly more ideas ($p < .001$). Note condition recall was significantly superior to the read-only condition recall ($p < .05$), but the difference between professional audience and student audience noting conditions did not produce significantly different recall.

BACKMAN, JARL. Cognitive structural organization at encoding and retrieval of textual information. *Scandinavian Journal of Educational Research*, 1980, *24*(4), 173–189.

Compares two schema operating phases in three experiments with regard to encoding and retrieving similarities in the hierarchic structure of stories. Subjects for

the three studies consisted respectively of 80 fourteen-year-old children in the first two studies and 59 university students in the third. Encoding involved subject and examiner made underlinings of sentences. Retrieval was assessed through written free recall and short summaries. Textual underlinings under either procedure seemed to have favorable effects on subsequent reproductions. A close and significant correspondence between encoding and retrieval of information was observed for simple stories, particularly in the older subjects.

HOLLIDAY, WILLIAM G. Selective attentional effects of textbook study questions on student learning in science. *Journal of Research in Science Teaching*, July 1981, *18*, 283–289.

Compares performance of 176 high school biology students on a comprehension test over biogeochemical cycles as provided in a picture-word diagram. Subjects were assigned randomly to three treatments and a control condition. The four treatment conditions consisted of diagram plus 20 questions, diagram plus five questions, diagram and no questions, and prose passage form and no diagram. The achievement measure consisted of a 30-item nondiagrammatic test covering the same diagram content queried in the 20 study questions provided to one experimental group. Subjects were instructed to learn the presented material in a self-paced manner. Group mean score differences were significant ($p < .05$) in the following order: 20-question (19.25), no-question (17.98), 5-question (15.57), and written passage without diagram (13.04). Results suggested that encouraging students to focus on selective portions of critical information may interfere with more thorough understanding of processes explained in diagrams.

HARTLEY, J., KENNEY, JILLIAN, OWEN, GWENDA, & TRUEMAN, M. The effect of headings on children's recall from prose text. *The British Journal of Educational Psychology*, November 1980, *50*, 304–307.

Examines the effect of four passage reading conditions upon the immediate and delayed recall questions of 175 second year pupils of an English comprehensive school. Subjects were streamed into high, medium, and low ability on the basis of primary school records and first year examinations. Results show that passages with headings were recalled significantly better on both immediate and long term recall than those with no typographical aids or with only a title ($p < .001$). Low ability students profited most from headings in the form of questions.

DUNKERLEY, PHILIPPE C. Extension of testing effects on the retention of prose. *Psychological Reports*, December 1980, *47*, 1062.

Studies the effect of retention of prose following the administration of only a short topical recall test immediately after learning for 34 tenth graders. They were given 15 minutes to study a passage of 1700 words. Immediately afterwards, half of the subjects responded to a topical recall test by listing the 12 events, while the other half completed a filler task. Two weeks later, all students were administered the topical recall test, as well as a 24-item short answer test asking about details in the passage. Analysis of mean differences indicated that students who responded to the short topical recall test during learning performed nearly twice as well as their counterparts on the delayed topical test, but the mean differences on the short answer test was not significant.

BOCK, MICHAEL. Some effect of titles on building and recalling text structures. *Discourse Processes*, October–December 1980, *3*, 301–311.

Employs a sentence-card sorting procedure to examine the influence of presenting a misleading headline upon the selection, sequencing, and recall of sequence in a news story presented serially on sentence cards. Eighteen text sentences were presented to two groups of 18 German university students each; each group viewed one

of two headlines. The sentences had previously been rated by 16 additional subjects as to their relatedness to the titles. The sentences were presented in random order and subjects were to arrange them in the most meaningful and comprehensible order. A second sorting was asked followed by a surprise test asking for subjects to reproduce the sentences. Findings revealed high stability of performance on the two-title-sentence related sorts: $r_s = .98$ ($p < .01$) and $r_s = .99$ ($p < .01$). High stability in sequencing was related to greater accuracy of recall ($p < .01$). Correlation coefficient of serial rank of sentences in sequence was +.522 ($p < .05$).

BERNARD, ROBERT M.; PETERSON, CHRIS H.; & ALLY, MOHAMED. Can images provide contextual support for prose? *Educational Communication and Technology Journal, Summer 1981, 29*, 101–108.

Investigates the influence of two forms of prepassage adjunct organizers (contextual image or contextual written description) on the immediate and two week delayed posttest performance of 88 university undergraduates who read an 800 word prose selection from *Scientific American*. The design called for two controls, a no-organizer control and a placebo control involving the reading of an equivalent but different passage. Multivariate ANOVA results revealed significant interaction of testing times and the independent conditions. No notable differences occurred between the two forms of organizer or no-organizer condition on the immediate posttest, although the three basic passage conditions were superior to the placebo passage condition. Significant differences ($p < .05$) were found for the two forms of organizer over the other conditions on the delayed posttest. No notable or significant differences occurred between the two forms of organizer for either immediate or delayed recall.

BRITTON, BRUCE K.; MEYER, BONNIE J.; HODGE, MILTON H.; & GLYNN, SHAWN M. Effects of the organization of text on memory: tests of retrieval and response criterion hypotheses. *Journal of Experimental Psychology: Human Learning and Memory*, 1980, *6*, 620–629.

Discusses the nature and products of four team research experiments treating the effects of text organization on memory when retrieval and response are explained in terms of high or low placement of target information (passages) in content structure. Subjects were drawn from a pool of undergraduate psychology students; N's respectively of 66, 192, 72, and 96. The first three experiments manipulated cues of various types during retrieval and measured in free or cued recall. In the fourth experiment, subjects were asked to either write down all recall or write down most important information. Significant differences obtained generally for high placement in free recall but not in cued recall. Manipulation of subject response criterion had little influence on effects of text organization on memory.

THOMAS, JOHN W. Agency and achievement: self-management and self-regard. *Review of Educational Research*, Summer 1980, *50*, 213–240.

Reviews research on the interrelations of student self-management behaviors, academic motivation, and basic achievement skills. Research related to the potential conflict between the "back to basics" methods and self-managed learning methods is examined. The author concludes that allowing students some control and responsibility over their learning can result in motivation to acheive, without sacrificing the goals of the "back to basics" movement.

SLAVIN, ROBERT E. Cooperative learning. *Review of Educational Research*, Summer 1980, *50*, 315–342.

Reviews research on classroom cooperative learning techniques in which pupils work in small groups and receive recognition based upon group performance. Concludes that the research supports the value of cooperative teaching methods.

Compares and contrasts the mtehods of cooperative learning research and suggests areas needing further research.

SHARAN, SHLOMO. Cooperative learning in small groups: recent methods and effects on achievement, attitudes, and ethnic relations. *Review of Educational Research*, Summer 1980, *50*, 241-271.

Examines, evaluates and compares five recently published methods for conducting cooperative small-group learning in the classroom, and the experimental studies conducted by the authors of these methods. The five methods are: Aronson's Jigsaw classroom, DeVries' Teams-Games-Tournaments (TGT), Slavin's Student Teams and Academic Divisions (STAD), the Johnsons' cooperative learning approach, and the Sharans' Small-group Teaching method. Findings are considered from experimental studies with these five methods, in terms of their differential effects on academic achievement, students' attitudes, and on ethnic relations in desegregated classrooms. The implications of the distinction between Peer-Tutoring and G-I methods are explored. New directions for research are suggested with those cooperative small-group techniques which appear to exert noteworthy effects on a variety of cognitive and social-affective variables.

SKON, LINDA; JOHNSON, DAVID W.; & JOHNSON, ROGER T. Cooperative peer interaction versus individual competition and individualistic efforts: effects on the acquisition of cognitive reasoning strategies. *Journal of Educational Psychology*, February 1981, *73*, 83-92.

Compares the effects of cooperative, competitive, and individualistic goal structures on achievement and the acquisition of high-level cognitive reasoning strategies. The sample consisted of four first-grade classes in a suburban school. The 86 children (44 boys and 42 girls) came from lower-class and middle-class homes. High, medium, and low achieving children were assigned by stratified random sampling procedures to the three instructional conditions. Within the cooperative and competitive conditions, subjects were assigned to triads of students with homogeneous ability or heterogeneous ability. In the cooperative condition, pupils were told to work together; in the competitive, they were told to compete for first, second, or third place. The individualistic condition was structured to minimize student interaction. There were three instructional sessions of 45 minutes each. Dependent variables were 1) achievement on each of three learning tasks, 2) the quality of the reasoning strategy used to complete each task, and 3) pupils perception of peer support. The three learning tasks were categorization and retrieval, metaphor paraphrase and explanation, and math story problems. Cooperative interaction, compared with competetive and individualistic learning, promoted higher achievement and the discovery of superior cognitive reasoning strategies. No differential effects were found concerning whether children were cooperating or competing with peers of equal, lower, or higher ability.

MEDWAY, FREDERIC J., & LOWE, CHARLES A. Causal attribution for performance by cross-age tutors and tutees. *American Educational Research Journal*, Fall 1980, *17*, 377-387.

Asks pupils participating in a cross-age tutoring program their view of the causes of successful and unsuccessful learning in tutorial instruction. For Experiment 1, 42 second- and fourth-grade pupils were selected by their teachers to receive tutoring in reading and 42 sixth and eighth graders were selected to be volunteer tutors. Tutors provided instruction in vocabulary, spelling and reading comprehension two hours a week for 12 weeks. After at least one month of tutoring, all tutors taught all tutees a set of analogies. After teaching the set once, the tutor and tutee were separated, the children's liking for each other was assessed and the tutee's analogy mastery was

tested. At this point, half the pairs were told the tutee had not learned well; the other half were told nothing and given additional teaching time. After this, all subjects were asked if the tutee learned more, the same, or less than the other tutees. In Experiment 2, similar procedures were used, but the subjects were 19 average reading (as assessed with the *Woodcock Reading Mastery Tests*) second graders (tutees) and 19 average reading fifth graders (tutors), and the attributions of successful and unsuccessful outcomes were made for hypothetical events instead of systematic manipulation of tutorial outcomes. Regardless of when attributions were measured (prior to, during or after tutoring), both tutors and tutees felt that tutorial learning was most dependent on effort rather than ability factors. Also, children tended to attribute positive learning consequences to their tutoring partner, but tended to attribute negative learning consequences to themselves. Findings were related to both attribution theory and cross-age tutoring.

WAERN, YVONNE, & ASKWALL, SUSANNE. On some sources of metacomprehension. *Scandinavian Journal of Psychology*, 1981, *22*(1), 17–25.

Defines metacomprehension as readers' evaluations of their performance on a task involving inferences derived from a text. In two studies metacomprehension was correlated to characteristics of the inferences required, in terms of 1) amount of information to be kept in long-term memory (Study 1); 2) amount of information to be kept in short-term memory (Study 2); and 3) existence of negatives (Study 2). In the first study, 41 college students read a text and afterwards judged 1) the correctness of a set of pragmatic inference statements and 2) their confidence in being correct or the difficulty of judging each statement. In the second study, 81 high-school students read a text and simultaneously judged 1) the correctness of a set of logical inference statements and 2) their confidence in being correct and the difficulty of judging each statement. In both studies, metacomprehension was not significantly correlated with actual performance. Findings indicated that the adequacy of metacomprehension is related to characteristics of the comprehension items.

KUNEN, SETH; COHEN, RONALD; & SOLMON, ROBERT. A levels-of-processing analysis of Bloom's taxonomy. *Journal of Educational Psychology*, April 1981, *73*, 202–211.

Tests the cumulative hierarchical assumption of Bloom's taxonomy by orienting students at four taxonomic levels (Knowledge, Application, Synthesis, Evaluation) to the same study material and subsequently administering an unexpected memory test. Subjects were 80 American and 52 Australian undergraduates. Stimuli were 30 commonly known principles from several fields of study. Five questions at each of the four taxonomic levels were written for each principle. After reading the stimuli (which had critical words underscored), and answering one of the four sets of questions, subjects solved math problems for two and a half minutes. The unexpected memory test then administered required recall of critical words. Number of words recalled was the dependent variable. With the exception of the Evaluation category, recall generally increased as Taxonomic level increased. The overall recall performance of the Americans and Australians was quite similar.

MCCAUGHEY, MARK W.; JUOLA, JAMES F.; SCHADLER, MARGARET; & WARD, NICKLAS J. Whole-word units are used before orthographic knowledge in perceptual development. *Journal of Experimental Child Psychology*, December 1980, *30*, 411–421.

Utilizes a visual search task for target letters in multiletter displays to investigate information-processing differences between adults and beginning readers. Subjects were 24 paid pupils tested before entering second grade and 24 college students. The

stimuli were three sets of 30 common words: three, four, and five letters. Anagrams of each word were made to make a set of pronounceable pseudowords and a set of unpronounceable nonwords, thus resulting in 270 three, four, and five letter displays. A single target letter was tachistoscopically exposed for 1500 msec., then a mask of X's and O's was exposed for 500 msec. and then one of the 270 three, four, and five letter displays was displayed. The task was to determine if the display contained the target letter. Reaction time (RT) was the dependent variable. RT increased with the number of letters for both groups, although the groups differed in RT. Children's RT to words was more rapid than RT to pseudowords, but RT to pseudowords was slower than RT to nonwords. Adults' RTs to words and pseudowords were similar, and both were more rapid than RT to nonwords. The authors conclude that as reading skills develop, children process familiar words differently from other letter strings. They maintain that it is only after a sight vocabulary is established that children recognize the regularities of English orthography.

MASSARO, DOMINIC W., & TAYLOR, GLEN A. Reading ability and utilization of orthographic structure in reading. *Journal of Educational Psychology*, December 1980, *72*, 730–742.

Examines the use of orthographic structure by individuals varying in reading ability. This study is a replication of an earlier report, but new stimuli were used. The stimuli were words and four types of anagrams made to create strings that orthogonally combined frequency and regularity measures of orthographic structure. Subjects of Experiment 1 were 22 college students, 11 good and 11 poor readers. Mean raw score for good readers on a "cut-time administration" of the *Nelson-Denny Reading Test* was 113.5; for poor readers, the average score was 50.3. Subjects of Experiment 2 were 20 paid sixth graders (10 poor readers and 10 good readers) and 10 paid college students. Poor readers scored below 6.2 on the *Gates MacGinitie Reading Test* and below the 63rd percentile on the *Sequential Tests of Educational Progress* (STEP). Good readers scored at or above 10.8 on the Gates and at the 98th or 99th percentile on the STEP. In Experiment 1, the word or anagram was displayed on a monitor, masked, and then the target letter was shown. Experiment 2 was the same, except the target letter came first and the exposure times differed. Good and poor college readers showed equally large effects of orthographic structure on task accuracy, whereas poor sixth-grade readers did not utilize orthographic structure to the same degree as very good sixth-grade readers.

PELAUM, SUSANNA W., & PASCARELLA, ERNEST T. Interactive effects of prior reading achievement and training in context on the reading of learning-disabled children. *Reading Research Quarterly*, 1980, *16*, 138–158.

Studies the effects of an instructional program designed to teach learning disabled children to use context to determine the impact of their errors on meaning and to correct their errors in order to maintain meaning. Participants were 40 pupils, identified by their schools as Learning Disabled, 26 boys and 14 girls. Average CA was 10-7 and ranged from 8-0 to 13-1. The average comprehension subtest score on the *Gates-MacGinitie Reading Test*, Level B, was 2.5. Average *Peabody Picture Vocabulary Test* IQ was 88 and average WISC IQ was 89. Twenty-five children were black, inner-city school pupils and 15 were enrolled in a private school for learning disabled children (one of these was black). The dependent variable was performance gain between pre- and post-scores on alternate forms of the Woods and Moe informal reading inventory. Twelve lessons were prepared (errors) which taught procedures for identifying errors and discriminating errors that affected meaning from errors that do not. A second set (correction) of 12 lessons taught procedures for determining what self corrections were, how they improve reading, what rates to use to correct them-

selves, and how to use those rules. A third set (practice) of 24 lessons was used which gave practice in oral reading and in the use of phonic cues. There were three experimental groups and a control group; Experimental group 1 received both the errors and corrections lessons, Experimental group 2 received the errors lessons and 12 practice lessons, Experimental group 3 received the corrections lessons and 12 practice lessons, and the control group received only the 24 practice lessons. The lessons were conducted twice a week over a 12-week period. Although adjusted mean scores after instruction were in the predicted direction, there were no main effects. A significant initial level of achievement by experimental treatment interaction was found. The interaction indicated that those who received greatest benefits from the experimental treatment were those at the highest initial achievement levels, i.e., those children whose instructional level was above grade level two. Additional analysis showed that changes in reading behaviors occurred as a result of the treatment.

BRITTON, BRUCE K.; ZIEGLER, ROBBIE; & WESTBROOK, ROBERT. Use of cognitive capacity in reading easy and difficult text: two tests of an allocation of attention hypothesis. *Journal of Reading Behavior*, Spring 1980, *12*, 23–30.

Presents two investigations of influence of easy and difficult material on the reading recognitive recall of 24 college psychology course students. Subjects read ten passages divided into easy (69% cloze accuracy) and difficult (35% cloze accuracy). The criterion task consisted of recognizing sentences embedded in the passages from distractor sentences. Easy passages had longer secondary task reaction times than the more difficult passages ($p < .05$). The second experiment modified a memory condition by providing a content test in the form of multiple-choice questions over passage specific information. Reaction times were longer for easier passages, but the difficult passages were read more slowly ($p < .05$). Results did not support the hypothesis that less cognitive attention is given to difficult passages.

BRITTON, BRUCE K. Use of cognitive capacity in reading: effects of processing information from text for immediate recall and retention. *Journal of Reading Behavior*, Summer 1980, *12*, 129–137.

Reports two experiments using 48 psychology course undergraduates which examines the reaction time product of the influence of subject expectancy of immediate or delayed test over the reading of 16 short passages in the first experiment and over six passages in the second. Reaction times were reliably longer for the delayed test condition ($p < .05$) across all difficulty levels of materials. Measurement of cognitive capacity during reading with a click probe placement revealed little difference in inspection times.

GOLDMAN, SUSAN R.; HOGABOAM, THOMAS W.; BELL, LAURA C.; & PERFETTI, CHARLES A. Short-term retention of discourse during reading. *Journal of Educational Psychology*, October 1980, *72*, 647–655.

Assesses and compares in two experiments the working memory of recently read discourse segments for 16 third graders and 16 fourth graders, and in a second study, for 24 third graders and 12 sixth graders. Subjects were divided into skilled and less skilled readers at each grade level by means of standardized reading test scores. A probe word memory procedure during oral and silent reading of subjects in the first experiment produced overall verbatim results for oral reading, particularly for less skilled readers. Results suggest that recoding processes tend to be sentence bounded. The second study extended the length of discourse segments, and identified that performance of unskilled readers was uniformly poor while skilled readers at both grade levels were affected by length of segments as well as by sentence boundary.

LESLIE, RON. Position saliency and limited capacity in children's short term memory for graphic patterns. *Journal of Reading Behavior*, Summer 1980, *12*, 105–115.

Assesses the ability of prereaders and beginning readers to utilize graphic information in tachistoscopically-presented, three-letter graphic patterns. Subjects in Experiment 1 were 56 pupils from two kindergarten and three first-grade classrooms in rural Wisconsin. Experiment 1 children were tested in April, thus the kindergarteners had received reading readiness instruction. In Experiment 2, the subjects were 28 urban kindergarteners tested in late September and early October before readiness instruction. The stimuli of Experiment 1 were 224 pairs of CVC patterns, of which 28 were designated the targets. The remaining CVCs were used as comparison stimuli for each of seven lists of target comparison pairs. The seven lists varied in the position where the target comparison pair differed. Stimuli were tachistoscopically projected at varying exposure times (ET) followed by a retention interval (RI) of varying lengths after which the comparison CVC was exposed. The task was to determine if the comparison CVC was the same as the target CVC. Target comparison sets from Experiment 1 were used in Experiment 2, except that for each target, there was another target that was its reversal. The procedures were the same, except that ET and RI were not varied. First graders correctly judged comparison CVCs significantly better than kindergarteners. Correct discriminations also increased with increasing ET and significantly decreased with increasing RI. Recognition performance was affected by manipulating the number and position of distinguishing letters. The easiest judgment was when all three letters differed; the two most difficult were medial letter only and final letter only differences. Children's judgments were based on only limited graphic information and displayed clear saliency effects of the initial letter position. CVCs differing in first letter only were more discriminable than CVCs differing in the final two letters. Both readers and non-readers (late kindergarteners) demonstrated these effects in Experiment 1. In Experiment 2, however, beginning kindergarteners failed to demonstrate these position effects. The author concludes that early reading or prereading activities result in serial encoding strategies.

LESLIE, LAUREN. Mediation or production deficiency in disabled readers? *Perceptual and Motor Skills*, April 1980, *50*, 519–529.

Studies the short-term memory processes of disabled and average readers by testing the effects of instructions for rehearsal. Subjects of Experiment 1 were 128 second and fifth graders. Reading classifications were made on the basis of the *Gates-MacGinitie Reading Test*, teacher ratings, and the McCracken *Standard Reading Inventory* (SRI). IQ was assessed with the *Lorge-Thorndike Intelligence Test*. Pupils with scores below 85 were not included. The average IQ of all children was approximately 100. Good and poor readers were matched on grade, sex, and IQ. In Experiment 2, 32 good and 32 poor reading second graders were matched on *Otis-Lennon Intelligence Test* scores (average score 109) and the SRI. In the first experiment, pupils were shown six of twelve pictures in a prearranged order, then the pictures were randomly mixed, and the children were to reconstruct the original order. All subjects received 12 trials. Rehearsal subjects were overtly instructed to name each picture as it was presented and to rehearse cumulatively the name of each picture presented previously on that trial. Nonrehearsal subjects were given no instructions to rehearse. In Experiment 2, similar materials and procedures were used, but the rehearsal children were given instructions to rehearse covertly. Children were observed during testing, and any observance of rehearsal strategies was noted. Overt rehearsal (Experiment 1) facilitated memory for second graders only on the first trial, and negatively affected the performance. Covert rehearsal facilitated memory if those children who were observed rehearsing were not included in the data analysis.

HARRIS, PAUL L.; KRUITHOF, ARNE; TERWOGT, MARK MEERUM; & VISSER, TON. Children's detection and awareness of textual anomaly. *Journal of Experimental Child Psychology*, April 1981, *31*, 212–230.

Assesses eight and eleven year old pupils' sensitivity to textual anomaly. For Experiment 1 there were 16 boys and 16 girls attending school in Rotterdam, Holland. Half had an average CA of 8-6, and half had an average CA of 11-6. Experiment 2 subjects were 72 Rotterdam pupils, half with an average CA of 8-7 and half were 11-6. In both Experiments, children read stories with one anomalous sentence. Reading time was measured in both experiments. In Experiment 1, pupils reported the anomalous sentence. In Experiment 2, recall was assessed and pupils were asked to explain the anomalous sentence. In Experiment 1, both age groups read the anomalous line more slowly than the appropriate line, but in a subsequent test of comprehension monitoring, the older group was more likely than the younger group to pick out the anomalous line as not fitting in with the rest of the story. Experiment 2 produced similar results: both 8- and 11-year-old children read an anomalous line more slowly, but 11-year-olds were more likely than 8-year-olds to cite the anomalous line or part of it when questioned about the possible presence of a line that did not fit in with the rest of the story.

KORIAT, ASHER, & MELKMAN, RACHEL. Individual differences in memory organization as related to word-association, object-sorting, and word-matching styles. *The British Journal of Psychology*, February 1981, *72*, 1–18.

Examines the degree of consistency in individuals' use of conceptual or associative categories in recalling words from a word-memory task. Also examined was the relationship between amount and type of clustering exhibited in the word-memory task and performance on three other tasks: object-sorting, word-association and word-matching. The word-memory list consisted of 33 Hebrew nouns which could be grouped into 11 three-word groups of mutually exclusive conceptual categories or 11 three-word groups of mutually exclusive associative categories. Subjects were 57 Hebrew undergraduates. For seven trials each subject was shown individually each word and wrote all the words s/he could recall. Subjects converged consistently upon one or the other of the two modes of organization with each successive trial. More associatively related words were recalled than conceptually related words. Numerous and varied relations between the object-sorting, word-association and word-matching tasks and the word-memory tasks were found, supporting the conclusion of considerable individual difference in amount and style of clustering memory items.

KIGER, JOHN I., & GLASS, ARNOLD L. Context effects in sentence verification. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 688–700.

Examines what happens to reaction time (RT) to verify easy items when they are mixed with difficult items in a verification task. In the three experiments, subjects were college students, 24 each in the first two and 28 in the third. Stimuli were presented on a monitor. In the first experiment, subjects verified simple arithmetic equations. In the easy list, the sums for the false items were less than either addend (e.g., $8 + 6 = 5$). In the difficult list, the sums for half of the false items differed from the correct sum by ± 1 or ± 2 (e.g., $8 + 6 = 15$). Equations common to both lists were verified slower when in the difficult list. In the second experiment half of the equations common to both lists were replaced with easy true and false sentences. The sentences also took longer to verify in the difficult list. The third experiment showed that difficult sentences also slowed the verification of easy arithmetic equations.

ASHER, STEVEN R. Topic interest and children's reading comprehension. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical*

Issues in Reading Comprehension. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 525–534.

Reviews and discusses selected research on topic interest and children's reading comprehension under the following headings: methodological issues, theoretical accounts of the effects of interests, individual differences in interests, and implications of this research for achievement testing and instruction. A brief summary of research findings and a bibliography of selected studies are included.

SCHMID, RICHARD F., & KULHAVY, RAYMOND W. Theme and prose comprehension: understanding or depth-of-processing? *Contemporary Educational Psychology*, January 1981, *6*, 66–75.

Describes two experiments and presents results relating to the relationship of thematic statements to prose recall. In the first experiment, 162 undergraduates were assigned randomly to experimental groups. Four conditions of organization (theme supplied before, theme supplied after, theme generated, and no theme), two conditions of presentation mode (serial or intact), and two of degree of abstractness were designed around the reading of two 200-word expository passages. Analysis of recall protocols served as criteria base. All three main effects (organization, presentation mode, and abstractness) yielded significance (p .01). Subjects receiving theme before reading or no theme recalled significantly more than those asked to produce a theme or to study a theme after reading. Intact presentation and the concrete version of the selection were recalled significantly better than those given a serial presentation of selection sentences or an abstract version of the selection. In the second experiment, 45 undergraduates again read the same two passages with three organization conditions (theme before, theme after, no theme) and the same two levels of abstractness. The theme before group recalled significantly more than the other two groups, with the remaining two showing no differences. The authors suggest that the search for key ideas involved in generating a theme prevents the effective encoding of information for later recall.

GRABE, MARK, & PRENTICE, WALT. The impact of reading competence on the ability to take a perspective. *Journal of Reading Behavior*, Spring 1979, *11*, 21–25.

Employs 40 sixth-grade subjects of small midwestern city schools who were divided into good-poor groups by a median split of vocabulary test scores on the *Iowa Silent Reading Tests* in tasks to read a passage differentiated by instructions to read carefully (control) or from a given perspective (experimental). Also, text was modified for sentence relevance to topic. Results demonstrated significant main effects for the instructional condition to the advantage of perspective provided subjects ($p < .05$), for reading ability ($p < .01$), and for sentence significance ($p < .01$). Interaction of instructions, ability, and sentence importance also was significant ($p < .05$). Poor readers given perspective recalled more information than poor readers in the control, but were not better in processing perspective relevant sentences.

GRABE, MARK. Utilization of imposed structure: the impact of reading competence and grade level. *Journal of Reading Behavior*, Spring 1980, *12*, 31–40.

Examines the influence of a reading comprehension highlighting task upon the performance of 176 fourth- and sixth-grade subjects in recalling perspective relevant information. Subjects were classified into good and poor readers by use of median split vocabulary subtest scores on the *Iowa Silent Reading Test*, Level 1. Readers were asked either to read and mark any material in a story they felt to be important or to read and mark the material in the story related to a prescribed topic. After reading, all subjects were instructed to write down all they could remember. Results demonstrated significant main effects for grade, reading ability, and idea unit importance ($p < .05$). Older and more able readers recalled more information. Good and poor readers differed in recall of perspective relevant, but not irrelevant, idea units.

WAERN, YVONNE. How do readers utilize a theoretical distinction? *Scandinavian Journal of Educational Research*, 1980, *24*(1), 25–39.

Investigates the effects of teaching a theoretical distinction on the intake, interpretation, and retrieval of new information, related to, but different from, the first. Participants in the experiment were 41 Swedish university freshmen psychology students, 21 control and 20 experimental. Both groups read a text about creative thinking. The text presented six propositions of one theory and then six propositions of the second theory. This instructional material did not contrast the two theories, but simply explained each. Experimental students studied the material until they were able to demonstrate the ability to distinguish the two theories. Four or five days later, both groups read a study text about creative thinking. This text covered five or six propositions mentioned in the instructional text and also one additional proposition. Previous knowledge of creativity was assessed before the study text was read. As students read each sentence of the study text, they had to express their thoughts about that sentence. This was the measure of intake of content. Four or five days later, subjects completed a series of test tasks including an interpretation test (verifying or rejecting statements as possible inferences from the text) and a free recall essay. The two groups did not differ significantly on previous knowledge of creativity, or on the thinking aloud and interpretation tasks. Free recalls did differ significantly, however. Some experimental group members included in their recall of the new text certain propositions from the instructional text without recognizing theoretical inconsistencies.

BREZIN, MICHAEL J. Cognitive monitoring: from learning theory to instructional applications. *Educational Communication and Technology Journal*, Winter 1980, *28*, 227–242.

Reviews selectively the research pertinent to information processing and human learning and develops hypothetical constructs related to the use of the cognitive monitoring approach in designing instruction and in implementing educational technology.

COWAN, ROBERT E. Effect of instructions-to-learn and repeated semantic processing on long-term free recall. *American Journal of Psychology*, September 1980, *93*, 459–465.

Factorially combines the variables of instruction-to-learn, item repetition, and retention interval in evaluating the performance of 36 college students on end of task and 24-hour delayed recall of word lists. Intentional vs. incidental learning conditions did not influence recall significantly. Recall increased significantly with number of repetitions ($p < .05$), and end of task recall was greater than delayed recall ($p < .05$).

HOLLAND, JAMES G. Analysis of behavior in reading instruction. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *1*, 261–277.

Argues that the concept of contingency has important implications for classroom teachers, curriculum development, and educational technology. Additionally, the author builds a case for the importance of providing a contingent relationship between a given reading skill and the student's success in performing the set of exercises that lead to mastery of that skill. Three beginning instructional programs are compared to demonstrate how research in errorless learning applies.

EPSTEIN, MICHAEL L.; RUGGIERI, CARRIE; & SCHERMERHORN, BRUCE A. Retrograde amnesia in free recall as a function of priority and "posteriority" instructions. *Psychological Reports*, December 1980, *47*, 887–890.

Checks the effects of placement of directions on recall of a word in a list. Subjects were 66 undergraduates who were shown five lists of 15 common nouns in

which each noun was a member of a different taxonomic category. Prior to the list presentation, one group of students was instructed to remember a word from a particular category. A second group was asked if they had noticed a word from a particular category and to recall it; a control group was given neither prior nor posteriority instructions. All subjects were asked to recall and write as many of the words as they could. Recall of the specific word was improved by both types of directions. Recall of the immediately preceding item was depressed.

THOMAS, EWART A. C., & HEMENWAY, KATHLEEN. Processing instructions, markedness, and congruity effects in a sentence verification task. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 701–718.

Assigns each of 40 students in an introductory psychology course to one of four experimental conditions. Subjects were to determine whether sentences were true or false given a set of criteria against which to evaluate the accuracy of the statements. Thus a sentence such as "the treaty passed" was given along with the number of votes cast for the bill and the pass fail criterion level. Experimental conditions varied in the way in which bill outcomes (pass fail) were stated and also in the way in which the outcome - bill status relation was described. An additive model was applied to the verification time and was used to describe markedness and congruity effects. Congruity effects were attributed to the similarity between critical stimulus values and a) non-critical or intrusive stimulus values or b) the content of the processing instructions given to participants.

BROWN, ANN L. Metacognitive development and reading. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 453–481.

Describes the kinds of issues that developmental psychologists are concerned with when they speak of metacognitive aspects of performance and how these might be related to reading. Also presents ideas for future research.

GHATALA, ELIZABETH S.; LEVIN, JOEL R.; DAVIS, JUDY A.; & TRUMAN, DIANE L. Sources of interference when testing for students' learning from sentences. *Contemporary Educational Psychology*, January 1981, *6*, 46–58.

Conducts two experiments to identify sources of interference arising from multiple choice tests. In Experiment 1 there were 42 middle-class, suburban fourth graders. In Experiment 2, 60 high school juniors from the same community were used. In both Experiments, subjects were read lists of sentences. In Experiment 1, the sentences were learned under either a repetition or a control situation. In repetition, subjects simply repeated each sentence three times. In Experiment 2, a third condition was added, imagery. Here subjects told the mental picture they had created for each sentence. On a multiple-choice test given 24 hours later, three types of test items were compared: context, the answer had appeared in a sentence whose subject (or object) was exactly the same as that in the sentence containing the correct response; old item variation, one of the distractors was taken from a sentence that was unrelated to the sentence containing the correct response; and new variation, the items contained only unfamiliar distractors. Interference arising from intersentence similarity was found to be a function of both the kind of learning strategies students were instructed to employ and the kind of strategies they reported having employed spontaneously. Only distractors which shared a context with information contained in test-item stems appeared potentially interfering.

KOBLINSKY, SALLY A., & CRUSE, DONNA F. The role of frameworks in children's retention of sex-related story content. *Journal of Experimental Child Psychology*, Apsil 1981, *31*, 321–331.

Reports two related experiments treating the influence of manipulated sex-stereotype frameworks on the story comprehension of fifth-grade pupils. Subjects read two stories about boy and girl characters whose print descriptions included an equal number of masculine feminine traits. In Experiment I, advance presentation of societal sex role congruencies or noncongruencies produced ANOVA results supporting the significant influence of stereotyped preset for 30 boy and 20 girl subjects ($p < .001$). The methodology for Experiment II differed from Experiment I in timing only; the 29 boys and 27 girls were presented the stereotyped descriptions immediately after reading each story. These subjects produced superior memory for sex-stereotype content regardless of description type; i.e., memory for content was similar to nondescription conditions.

SCHULSTER, JEROME R. Episodic and semantic aspects of memory search in paragraphs of different lengths. *American Journal of Psychology*, December 1980, *93*, 711–724.

Replicates a previous study by having 48 university students respond to a questionnaire of true-false statements, rate their confidence in statements, and verify one month after learning a pertinent paragraph of information, statements from the paragraph and questionnaire domains. Verification latencies were significantly related to the confidence rating of the statement but not to the length of the paragraph learned in the laboratory.

LINDSEY, JIMMY D. Effect of direction, text organization, and age level on reading comprehension. *Reading Improvement*, Fall 1980, *17*, 219–223.

Investigates the effect of three conditions—direction, text organization, and age level—on the recall of goal-relevant and incidental information by 48 adolescent students classified as Learning Disabled. Subjects had average or above IQ, 16 point differences between verbal and performance IQ, deficits in specific learning processes, normal visual and auditory acuity, and educational underachievement of two or more years. Two chronological age groups of equivalent reading ability were formed of the subjects: mean ages 16 and 17-3, respectively. Subjects read 2000 word passages under the several conditions, performed brain teasers, took the recall test, and responded to the perception questionnaire. Predirections for reading were either general or specific. Text organization was modified to present goal visible and content embedded sentences. Results indicate that for these subjects, direction did affect recall of goal-relevant information, but not of incidental information ($p < .05$). Text organization and age level did not influence recall of goal-relevant information ($p < .05$).

IV-6 Visual perception

NOYES, LIZA. The positioning of type on maps: the effect of surrounding material on word recognition time. *Human Factors*, June 1980, *22*, 353–360.

Tests the effects on visual search performance of objects placed adjacent to words being searched on maps. Two experiments were conducted, the first of which was designed to test the effect of the position of distracting material on visual search for names; the second tested a wider range of possible distractors more likely to be found on a map. There were 10 subjects in Experiment 1 and 100 in Experiment 2; all

subjects were British college students. In Experiment 1, slides were shown to subjects and the position and length of each fixation prior to target fixation on the map (the name being searched) were measured by corneal reflections. The independent variables of each target word were the position of the distractor and the word's initial letter. Target words (pronounceable nonsense words) were placed in a vertical position in one of four positions relative to the target words: next to first or last letter, and one space away from first or last letter. In Experiment 2, the distractors were 18 visual symbols commonly found on maps. Eye movements were not recorded, and the dependent measure was search time. Distractors near a word being fixated significantly prolonged the mean fixation time. This occurred for distractors both at the beginning and end of a word, although distractors adjacent to the beginning of the word resulted in a significantly longer fixation time than for any other position. Words with no distractors at all were found most rapidly. Lines and small dots next to target words did not increase search time, but all other symbols did.

FRITH, UTA, & VOGEL, JULIET M. *Some Perceptual Prerequisites for Reading*. Newark, Delaware: International Reading Association, 1980.

Discusses the role of perception in reading and the acquisition of reading. Two papers are presented, one by each of the authors. Frith's paper is based on the premise that the reading process is dependent upon a perceptual system which is quite independent of language and language comprehension. She argues that there is a world or grammar of two-dimensional space and that considerably more research is necessary to understand this grammar. She discusses several topics of research on perception such as processing single shapes, processing arrays of shape, and producing shapes. Next she states and discusses five testable hypotheses on the grammar of two dimensional space: 1) the mirror image problem, 2) the problem of mind's eye scan (internal or processing scan versus external or real eye scan), 3) the production versus recognition problem, 4) the problem of building a framework to describe space and spatial relations (called the Cartesian Framework Problem) and 5) the problem of describing the differences between good and poor readers in using two-dimensional space. Vogel's paper deals primarily with the bases for orientation confusions in normal children beginning to learn to read or write. Focuses on the question of whether the orientation confusions of younger children persist and contribute to the errors made by older poor readers. Major factors discussed are rotation errors, left-right or reversal difficulties, memory encoding limitations, and sequencing problems. Generates two hypotheses and discusses each: persisting reversal errors may be a by-product of a general memory encoding limitation, and children who have difficulty retaining information about order of sequence may overcompensate in their writing maintaining a rigid left-to-right order of strokes even when this results in producing some backward letters. Concludes that orientation errors provide a frame of reference for examining the bases for the persisting errors of children who have difficulty learning to read.

JOHNSTON, JAMES C. Effects of advanmce precuing of alternatives on the perception of letters alone and in words. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 560–572.

Tests perception of letters alone and in words with three types of advance precuing of information: a) no precue, b) precue of the position of the critical letter, c) precue of the choice alternatives as well as the position of the critical letter. Participating in the three experiments were, respectively, 24 college students, 24 high school students, and 48 unidentified students. Stimuli in all three experiments were pairs of four-letter words differing in only one critical letter position. They were presented tachistoscopically. With patterned masking, the no-precue condition showed a strong word superiority effect (WSE): accuracy was 15% higher for a letter in a word than for

a letter alone. Position precuing eliminated the WSE. Precuing alternatives as well as position had no significant effects beyond those of precuing position only. Without patterned masking, the WSE was virtually nonexistent even in the no-precue condition, but precuing alternatives as well as position facilitated performance relative to the other conditions. Explicit constraint of letter alternatives thus improved performance under conditions where the WSE was virtually nonexistent while failing to improve performance under conditions where the WSE was strong.

HABER, RALPH NORMAN, & SCHINDLER, ROBERT M. Error in proofreading: evidence of syntactic control of letter processing? *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 573–579.

Explores a possible discontinuity in performance in detecting misprints in function words as compared to other types of words. In each of four 800 word passages from popular books and magazines, 25 words were misspelled. Ten of the misspellings were three or four letter function words, 10 were three or four letter content words and five were 5-11 letter content words. Half of the misspellings replaced one letter with a letter of the same shape, and half the misspellings replaced one letter with a letter of a different shape. The 25 paid adult subjects were told to read for comprehension and to circle all mistakes. They were also told that if they answered all comprehension questions correctly, they would receive a $2.50 bonus. Fewer misspellings were detected in function words than in content words of equal length. Misspellings that changed the overall shape of a word were more likely to be detected than ones that did not. The latter effect was larger for function than for content words, suggesting that function words may often be identified by their overall shape rather than by analysis of their individual letters.

MILLER, JEFF, & BAUER, DAVID W. Visual similarity and discrimination demands. *Journal of Experimental Psychology: General*, March 1981, *110*, 39–55.

Gives results of a series of six experiments identifying perceptual processes that are subject to adjustment. In all experiments the task was character classification, and the stimulus set consisted of four pairs of visually similar letters. The eight letters were grouped into a positive and a negative set, and subjects were required to classify a series of test letters according to their set membership. Whether the two members of a visually similar pair were assigned to the same set or to different sets was the key manipulation. Subjects were college students who received course credit for participating. Subjects responded more quickly to two visually similar letters when they were both assigned to the same set than when they were assigned to different sets. The findings led the authors to conclude that the perceptual system can make highly specific adjustments to task demands, and that the perceptual system can be set to respond with a letter identification on the basis of any amount of information that is sufficient in the context of the particular task. Implications for general theories of an adaptive perceptual system are discussed.

MCKIERNAN, JACK, & AVAKIAN, MARGO. Directional awareness training: remediation of receptive letter reversals. *Academic Therapy*, *16*, November 1980, 193–197.

Evaluates the effects of a program that trains directional awareness on the receptive letter reversal discrimination errors of disabled readers. Ten disabled readers ranging in age from 6 to 19 served as subjects. Receptive letter reversal was assessed with the *Jordan Left/Right Reversal Test*. The 12- to 24-week training program consisted of games and physical tasks designed to recapitulate the normal developmental sequence. Number of reversal errors on the Jordan test decreased after training.

HUBA, MARY D., & VELLUTINO, FRANK R. The development of visual encoding and retention skills. *Journal of Experimental Child Psychology*, August 1980, *30*, 88–97.

Examines the development of the ability to encode visually, without conjoint verbal encoding, stimuli which are presented visually. The experimental procedures precluded an opportunity to encode verbally or auditorily the visually presented stimuli by utilizing a shadowing technique. Shadowing required subjects to listen to a tape recording of letter names read rapidly by a female voice and repeat aloud the letter names. After five seconds of shadowing, a visual presentation of the stimulus letter was flashed on a tachistoscope or presented orally on the tape by a male voice. After a time delay of 0, 4, or 10 seconds, subjects reported the letter seen or heard. During the time delays of 4 and 10 seconds, subjects continued to shadow. To examine the developmental stages of visual encoding, 10 second-grade pupils, 10 sixth-grade pupils, and 16 college students were the subjects. On the *Slosson Intelligence Test*, the elementary pupils had average IQs of 119, and, according to teacher judgement and word recognition scores on the *Gilmore Oral Reading Test*, the elementary subjects were progressing normally in academic activities. There were four independent variables: age of the subjects (8, 12, 21), mode of presentation of the letter to be remembered (oral or visual), the retention interval (0, 4 or 10 seconds) and the phonemic similarity of the letters in the shadowing task to the memory letters (similar, not similar). There was no siginficant difference between ages in visual or auditory letter memory recall, and there were no significant interactions between age and any other variable. Errors increased for all subjects with the length of delay before reporting and when stimulus letters and shadowing letters were similar. The auditory task was more difficult than the visual.

EGETH, HOWARD E., & SANTEE, JEFFREY L. Conceptual and perceptual components of interletter inhibition. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 506–517.

Investigates the effects of target-noise similarity on ability to discriminate between two target letters. The two experiments or paradigms included 10 and 12 undergraduate students, respectively. In both paradigms, pairs of letters were presented tachistoscopically. In one, subjects had to report which of two target letters (e.g., A or E) had appeared in a location specified by a poststimulus cue. In the other, subjects simply had to indicate whether either target was presented, without regard to location. The findings indicated that performance is poorer when the noise letter is the same as the target letter than when it is the other target or a nontarget. Performance was also low when the noise letter shared only the same name as the target (e.g., Aa). This latter finding, it was concluded, suggested that interletter interference effects cannot be entirely explained in terms of inhibition between visual features.

PAAP, KENNETH R., & OGDEN, WILLIAM C. Letter encoding is an obligatory but capacity-demanding operation. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 518–527.

Uses a classification task to compare the processing demands of letter primes that were to be ignored and had no predictive utility to letter primes that were to be processed and were highly predictive. In Experiment 1, 12 college students served as subjects. The number of subjects for Experiment 2 was not reported. Stimuli were five vowels and five consonants (B, J, F, P and S). When subjects deliberately attended to a letter prime, encoding produced more interference (Experiment 1), but either familiar (Experiment 1) or non-familiar (Experiment 2) primes produced significant amounts of interference even when the subject was trying to ignore the visual input. The results are consistent with the view that the early perceptual components of encoding are both obligatory and resource demanding.

ASHMORE, ROBERT J., & SNYDER, ROBERT T. Relationship of visual and auditory short-term memory to later reading achievement. *Perceptual and Motor Skills*, August 1980, *51*, 15–18.

Correlates performance on the Visual Memory Technique (VMT) with performance on the Bender-Gestalt, the Digit Span subtest of the WISC-R, and the *Wide Range Achievement Test* (WRAT). The VMT required children to draw as many of the Bender-Gestalt designs as they could recall immediately after completing the normal administration of the Bender-Gestalt. The VMT results in three subscores and a total score. Subjects were 25 female and 24 male first graders with an average score on the *Metropolitan Readiness Test* at the 66th percentile. The Bender correlated −.328 with the WRAT; the WISC-R Digit Span correlated .29; the range of correlation coefficients between the VMT scores and the WRAT was .06 to .429, and only the latter was significant.

SCARPATI, STAN, & SWANSON, LEE. Implicit verbal coding of visual information for normal and learning disabled readers. *Perceptual and Motor Skills*, December 1980, *51*, 1158.

Examines the effects of forced verbal encoding on the visual recall of 24 normal and 24 matched learnig disabled pupils. Pupils were matched for age (CA range = 8 to 10 years) and IQ. The procedures of the study were not detailed. The evidence suggested that forced naming increases the retrievability of visually presented information.

HERSHENSON, MAURICE. Guessing instructions, experience with stimuli, and array structure in tachistoscopic letter identification. *American Journal of Psychology*, December 1980, *93*, 657–663.

Assesses the role of guessing instructions, familiarity with the stimuli, and array structure on a letter identification task. The 55 graduates and undergraduates used as subjects were divided into groups according to the instructions received and prior experience with the stimuli. Fifty subjects received no contact with the stimuli until the actual experimental conditions;five subjects committed the stimulus arrays to memory before participating in the study. Stimuli, presented tachistoscopically, consisted of 70 seven-letter arrays divided into 14 arrays in each of four structural groups. Seven retinal locations were sampled. Retinal locus was the strongest determiner of correct letter reports. Stimulus structure did not produce a systematic effect.

FLOWERS, J. H.; POLANSKY, M. L.; & KERL, S. Familiarity, redundancy, and the spatial control of visual attention. *Journal of Experimental Psychology: Human Perception and Performance*, February 1981, *7*, 157–166.

Studies in four experiments the joint effects of spatial cuing and stimulus properties (familiarity) on the recall accuracy of tachistoscopically presented printed character strings. It was hypothesized that visual attention during scanning is drawn to familiar words or visual stimuli, thus reducing recognition of unfamiliar stimuli in another part of the display. The subjects of all four experiments were college students. Stimuli in Experiments 1 and 2 were three sets of projected trigrams. In Experiment 1, one trigram was a common word; in Experiment 2, one trigram was a redundant letter string. After presentation and a short delay, subjects heard an auditory cue and wrote what they recalled from a specific location (left, center, or right) in the presentation. Experiments 3 and 4 were similar to the first two, except the stimuli were pairs of four letter combinations instead of three trigrams, the cue to respond was visual instead of auditory and the stimuli were displayed on a video monitor instead of a screen, thus providing a considerably smaller total visual angle. When words (Experiments 1 and 3) were in the display, they significantly reduced the accuracy of recognition of letters in

other positions. Redundant letter strings (Experiments 2 and 3) produced little or no such interference. The authors conclude that in addition to facilitating character scanning, familiarity may operate in automatically directing attentional resources to a particular spatial region of a display. They also suggest that analysis of the pertinence of a printed character string (redundant letters) occurs rapidly, as the redundant letter strings did not capture and maintain attentions to the extent of meaningful words.

BUURMAN, RUDY DEN; ROERSEMA, THEO; & GERRISSEN, JACK F. Eye movements and the perceptual span in reading. *Reading Research Quarterly*, 1981, *16*, 227–235.

Describes the procedure and results of a reader eye movement tracking study for 12 Dutch undergraduates of normal vision who read three 500 word passages drawn from a high school textbook. A Honeywell Mark II oculometer was used to track eye movements by corneal reflection of an infra-red light source and was recorded by a TV eye-camera. Passages were presented with a different window size for each page. After finishing a passage, subjects wrote the answers to six open-ended questions. Tabular findings of the reading variables for the several window sizes in character lengths are presented. Results yielded a perceptual span of 25 to 31 characters (12 to 15 character positions to the right and left of fixation point, or four to five degrees of visual angle).

O'REGAN, J. KEVIN. The control of saccade size and fixation duration in reading: the limits of linguistic control. *Perception & Psychophysics*, August 1980, *28*, 112–117.

Considers the influence of letter information presented by visual display in variations of length and critical focus displacement upon the eye movements of 24 native French speakers. Reports that typographical cues gained during current fixation, and that six spaces to the right of fixation point, is used to guide the eye in reading. Linguistic processing from this region influenced duration of the next fixation and exerted additional influence on subsequent fixations.

STEWART-LESTER, KRISTA J., & LEFTON, LESTER A. Information extraction from the parafovea: a developmental study. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 624–633.

Evaluates the difference between children and adults in their abilities to extract visual information from the fovea and the parafovea, both with and without the availability of graphic word cues. High frequency words typed in normal and alternating (i.e., lower and upper) case were presented tachistoscopically in the fovea and parafovea to 30 third graders, 30 fifth graders, and 30 adults. All children read at or above grade level on the *Comprehensive Test of Basic Skills*. The adults were university students. Dependent measures were percentages of letters and words correct. The results indicated a) that there was little difference across grade level in ability to extract visual information from the parafovea and b) that the effects of using alternating case as compared with normal case yielded similar deficits in the fovea and parafovea for all grade levels. Serial position curves of letters correct also supported the similarities across grade level in the parafoveal information extraction process. The results suggest the limitations of using altered text to study the use of the periphery in reading, due to the possible influences of alternating case on foveal as well as parafoveal word identification.

SOLMAN, ROBERT T.; MAY, JAMES G.; & SCHWARTZ, BARRY D. The word superiority effect: a study using parts of letters. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 552–559.

Examines the effects of contextual constraint on the correct identification of critical letters in words by using a postcuing technique. Twelve undergraduate students were presented with four letter strings exposed tachistoscopically. The stimulus characters were arranged to form three types of letter strings: strings in which the letters did not form words, words in which contextual constraint of the critical letters was minimized, and words in which contextual constraint of the critical letters was maximized. Each complete string was formed by combining two strings of letter fragments, and these part-letter strings were separated by intervals of 0, 25, 50, 75, 110, 125, and 150 msec during presentation. Correct identification of critical letters showed that the presentation of words resulted in superior performance when the reported letter occupied Serial Positions 2 and 3. No support was obtained for the suggestion that word percepts decay more slowly than letter percepts.

CARNINE, DOUGLAS W. Two letter discrimination sequences: high-confusion-alternatives first versus low-confusion-alternatives first. *Journal of Reading Behavior*, Spring 1980, *12*, 41–47.

Evaluates the effects of varying the sequencing of letter discrimination tasks from easy to difficult and from difficult to easy. Subjects were 20 five- and six-year-old preschoolers who were unable to identify by sound or name more than one of the experimental stimuli (four visually similar target letters, b, d, p and g and three visually dissimilar distractors, a, o and c). Stimuli consisted of one of the target letters and four other letters. Subjects were to match the presented target letter with the same target letter among the four other letters. There were three presentation sets: low confusion – two of the four other letters were distractors, two were target letters; moderate confusion – three of the other letters were target letters, one was a distractor; and high confusion – all four of the other letters were target letters. Children learned the letters by starting with either the low confusion set or the high confusion set. Children starting with the low confusion set learned the target letter in significantly fewer trials than children beginning with the high confusion set.

IV-7 Auditory perception and reading

HARBER, JEAN R. Auditory closure and reading. *Reading Horizons*, Winter 1981, *21*, 134–138.

Explores the relationship between auditory closure and reading performance in learning disabled children. Subjects were 75 children, ages 6 to 11, with a mean IQ of 94 who evidenced an academic deficit. The following tests were given: Auditory Closure subtest of the *Illinois Test of Psycholinguistic Abilities* (ITPA); and the Word Recognition and Word Analysis, Oral Reading, and Silent Reading subtests of the *Durrell Analysis of Reading Difficulty*. Three groups (high, average, low) were formed on the basis of Durrell performance. The correlation coefficient between auditory closure and reading performance was .92 for the low group, .87 for the average group, and .47 for the high group.

ZIFCAK, MICHAEL. Phonological awareness and reading acquisition. *Contemporary Educational Psychology*, April 1981, *6*, 117–126.

Examines the relationship between phonological awareness and reading success. The study correlates three measures of phonological awareness to measures of reading and decoding ability. The three measures of phonological awareness are: 1) invented spellings of words judged to be part of a first grader's speaking vocabulary that generally followed a CVNC (consonant, vowel, nasal, stop consonant) pattern; 2) a phoneme segmentation task in which the child repeated the sound of word spoken

and tapped out the number of segments in each stimulus; and 3) Rosner's *Test of Auditory Analysis Skills*, in which children are orally presented a word and are to identify syllables or beginning sounds. Reading achievement with the *Gallistel-Ellis Test of Coding Skills* (GE) and IQ was assessed with the *Slosson Intelligence Test*. SES was determined with the *Warner Scale Ranking*. There were significant correlation coefficients between the WRAT and invented spelling (.69), phoneme segmentation (.78) and auditory analysis (.54). Correlation coefficients between the GE and the three auditory tasks were similar (.62, .71 and .56, respectively). In a stepwise multiple regression controlling for IQ, SES, CA and sex, both phoneme segmentation and invented spelling significantly correlated with WRAT scores (Mult-R = .80), but the auditory analysis test did not. The author suggests that an understanding of phonological relations above and beyond that required for ordinary speaking and listening enables the beginning reader of English to make contact with his alphabetic writing system at the phonemic level.

LENEL, JULIA C., & CANTOR, JOAN H. Rhyme recognition and phonemic perception in young children. *Journal of Psycholinguistic Research*, January 1981, *10*(1), 57–67.

Examines the development of phonemic perception in four-, five-, and six-year-old children. Subjects were 48 preschoolers (average age 57 months), 48 kindergarteners, and 48 first graders. Children were presented orally two sets of 24 words each matched with a word that rhymed with it (last two phonemes the same) or one of six words that differed phonemically from the target word in varying degrees. Half the children were also presented a picture representing the word as each word was pronounced. The task was to report if the two words did or did not rhyme. Performance improved significantly with age from an average of 75% correct for preschoolers to 87% correct for first graders. Words that were similar to the target word in two phonemes were significantly more difficult to identify correctly than were words that were similar in zero or one phonemes. The results were discussed as they relate to improving reading readiness.

IV-8 Reading and language abilities

GOODMAN, KENNETH S., & GOODMAN, YETTA, M. (Compilers). *Linguistics Psycholinguistics and the Teaching of Reading*. Newark, Delaware: International Reading Association, 1980.

Presents an annotated bibliography on linguistics and psycholinguistics as applied to reading. Topics covered are: beginning reading; comprehension, semantics and meaning; curriculum; language differences: dialects, bilingualism, biliteracy and sociolinguistics; discourse analysis; general applications of linguistics and psycholinguistics to reading; instruction in reading; miscue analysis; relationship between oral and written language; the reading teacher and linguistics; syntax, grammar, and intonation; testing and evaluation; theories of reading; and words.

CRAIN, STEPHEN, & CRAIN, WILENE. The syntax and semantics of reading. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Fourth Yearbook*, 1980, 190–199.

Cites selected psycholinguistic research, relates it to aspects of linguistic theory, and illustrates the applicability to reading acquisition and to the linguistic processes used by fluent readers. The article points out properties of linguistic processing most readily applicable to reading and also discusses the extent to which children have acquired various linguistic skills by the age at which reading is introduced.

LIBERMAN, ISABELLE Y., & SHANKWEILER, DONALD. Speech, the alphabet, and teaching to read. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *2*, 109–132.

Reviews research conducted by the authors and others in three areas: linguistic awareness and the alphabet, the role of phonetic representation, and the analysis of reading errors. Concludes with implications for instruction in beginning reading.

EVANS, MARTHA; TAYLOR, NANCY; & BLUM, IRENE. Children's written language awareness and its relation to reading acquisition. *Journal of Reading Behavior*, Spring 1979, *11*, 7–18.

Develops a battery of seven tasks to determine what beginning grade one children know about the written language code. In addition the relationship between September performance on the seven tasks and June reading performance was investigated. The seven tasks assessed a) discrimination of writing from geometric shapes and letter-like forms, b) segmentation of aurally presented sentences, c) segmentation of visually presented sentences, d) equation of oral written word lengths, e) ability to predict from pictures, f) completion of aural sentences with and without graphic clues, and g) competence with the metalinguistic aspects of reading. Subjects were 53 pupils randomly selected from 145 children in two schools. In addition to the seven tasks given, scores on the *Metropolitan Readiness Test* (MRT) and on the *Metropolitan Achievement Test*, Primary 1, (MAT) were analyzed. Coefficients between the MRT and the seven tasks ranged from .46 to .68 with the exception of the written language identification task (r = .24). Coefficients of correlation between the seven tasks and the MAT ranged from .29 to .62. The combination of the seven subtest scores with the MAT showed a coefficient of .82.

CHRISTIE, JAMES F. Syntax: a key to reading comprehension. *Reading Improvement*, *17*, Winter 1980, 313–317.

Reviews research related to the relationship of reading comprehension to the frequency of syntactic structures in children's oral language. The author concludes that children have difficulty comprehending written materials that contain unfamiliar syntactic structures.

HUGGINS, A.W.F., & ADAMS, MARILYN JAGER. Syntactic aspects of reading comprehension. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 87-112.

Discusses two issues in beginning reading: what determines the difficulty of various syntactic constructions, and the evidence that demonstrates that young children have difficulty coping with syntax.

VANCE, DOUG. Research update: the meaning of meaning. *Wisconsin State Reading Association Journal*, January 1981, *25*, 30–33.

Discusses the heuristic problems of defining meaning for reading research and educational purposes. Identifies and illustrates meaning as presented by selected philosophers, and reading researchers.

DE BEAUGRANDE, ROBERT. Text and discourse in European research. *Discourse Processes*, October/December 1980, *3*, 287–300.

Surveys European research on text and discourse. While the study of texts in discourse is relatively new in the United States, the tradition is considerably older in Europe. The author comments that most work in text linguistics up to 1970 was

devoted to such phenomena as recurrence, co-reference, anaphora, elipsis, and junction. Research in descriptive structural linguistics as well as general transformational grammar is cited and reviewed.

ORTONY, ANDREW. Metaphor. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 349–365.

Reviews research on how metaphors are understood. After presenting an argument as to why an understanding of this topic is relevant, the author discusses three topics: 1) the capacity of children to comprehend metaphors, 2) the theoretical mechanisms of comprehending metaphors and 3) the effects of metaphors on learning particularly the role of metaphors in text.

HART, JANE TYLER; GUTHRIE, JOHN T.; & WINFIELD, LINDA. Black English phonology and learning to read. *Journal of Educational Psychology*, October 1980, *72*, 636–646.

Examines the hypothesis that phonological differences between standard English and Black English interfere with the ability of beginning readers to learn sound-spelling correspondences in reading. Subjects were 45 "normal reading" first grade children experimentally formed into three groups for comparison and analysis: low SES black, low SES while, and middle SES white. Stimulus words were of three types: dialect free, dialect-conflict/homonym, and dialect conflict/nonhomonym. Words were selected from the high frequency words on the Otto-Chester List of Sight Words for Beginning Readers. Each word was spoken by the examiner as it was shown to individual children. Half the time, the word was given in standard English and half the time either the final or initial consonant was left off. Children were to indicate whether the spoken/written words matched or not. Subjects were given a decoding test immediately using the same words. No significant main effect obtained for group, and groups did not interact significantly with other variables.

HALL, WILLIAM S., & GUTHRIE, LARRY F. On the dialect question and reading. In Rand J. Spiro, Bertram C. Bruce & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 439–452.

Reviews studies on dialect variation and discusses the implications of these studies for reading performance. The dialect variant described in Vernacular Black English and the levels of analysis considered are: 1) phonological, 2) grammatical, and 3) lexical and content. Reasons for the equivocal nature of many of the existing findings are posited and directions for further research are suggested.

NADEAU, ADEL. Key concepts and instructional models for bilingual education programs. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Fourth Yearbook*, 1980, 200–205.

Reviews selected research literature and makes recommendations based on the findings for the reading instruction of bilingual children. Included in the recommendations is the recognition that the development of a good language base in both the primary and secondary language is an essential prerequisite to reading.

MANARINO, PRISCILLA. Linguistic variables and the ability to recover deep structure among second grade black students. *Reading Improvement*, Winter 1980, *17*, 243–247.

Hypothesizes and investigates a theoretical causal model describing relationships among selected linguistic variables and reading comprehension with grade two black pupils. The interrelationship among socioeconomic status, dialect, syntactic

control, and word recognition as they affected pupils' ability to recover deep structure were studied. The *Deep Structure Recovery Test* (DSRT) was used to assess ability to recover deep structure; word recognition was assessed by 50 words taken from vocabulary on the DSRT; socioeconomic level was determined by syntactic differences indicative of black dialect. Subjects were 125 pupils randomly selected from the black population of a large metropolitan school district. Using the path analysis technique, the author found that oral syntactic control had the greatest direct effect upon deep structure recovery; word recognition had the second greatest effect. Dialect had a greater indirect effect upon the ability to recover deep structure than a direct effect.

NATALICIO, DIANA S. Reading and the bilingual child. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *3*, 131–149.

Examines critically some of the issues involved in teaching reading to bilingual children. Relevant research bearing on the question of the priority of native language literacy is discussed as well as policies and practices in bilingual education. The author notes that research claims supporting the superiority of the native language approach to reading are limited in both number and quality. Research on how best to teach reading to children in bilingual settings in the United States provides few answers because of methodological weaknesses and also because much that exists was done in settings differing markedly from those in the U.S. The author calls for carefully designed and executed investigations into the issues basic to the teaching of reading to bilinguals in the United States.

CLARKE, MARK A. The short circuit hypothesis of ESL Reading—or when language competence interferes with reading performance. *The Modern Language Journal*, Summer 1980, *64*, 203–209.

Summarizes two studies developed as preliminary investigations into the reading behaviors of adults reading in two languages: Adults reading in their native language, Spanish (L1), and their second language, English (L2). In the first study, the Spanish and English cloze test performances of good and poor L1 readers were examined. The second study analyzes the oral reading performances in Spanish and English of one good and one poor L1 reader. In both studies, good readers produced fewer errors than poor readers; the good readers' miscues in both languages were of higher quality (i.e., either semantically acceptable of self-corrected) and good readers displayed superior comprehension. All differences between good and poor readers, however, were much greater in Spanish than in English. The author argues that the psycholinguistic perspective of reading can account for these findings and that there is not an extensive degree of transfer of reading skills from one language to the next. In addition, the article states that a limited control over a language "short circuits" the good reader's system or strategy for reading, and makes him/her revert to the strategies of poor readers. This "short circuit" hypothesis is duscissed extensively.

CHU-CHANG, MAE. The dependency relation between oral language and reading in bilingual children. *Journal of Education*, Winter 1981, *30*, 30–55.

Reviews research related to the topic of the dependency relation between oral language and reading in bilingual children. The literature reviewed included models of reading, reading instruction for bilingual children, and the processing of dual languages by bilingual speakers. A model of monolingual versus bilingual reading was presented and implications for instruction of bilingual children were raised.

OREN, DITZA L. Cognitive advantages of bilingual children related to labeling ability. *The Journal of Educational Research*, January/February 1981, *74*, 163–169.

Examines the effects of bilingualism and monolingualism on the ability of four- to six-year-old children to label and relabel objects. Subjects were 49 coordinate or compound bilingual children from upper and upper-middle classes. They consisted of four groups: 1) eight English-Hebrew speaking children who spoke both languages coordinately; 2) 16 English-Hebrew speaking children with limited Hebrew and fluent English (called compound); 3) 15 compound or coordinate bilingual children whose parents spoke one of several languages; and 4) 10 English speaking monolinguals. Three different tests were constructed for this research: object constancy, a naming test and a relabeling test. A specially designed reading readiness questionnaire based upon criteria listed in the *Lee-Clark Readiness Test Manual* was used to control sample homogeneity. The average performance of the coordinate bilingual subjects in the naming and in the relabeling tests was significantly better than that of the nomolingual subjects. Success in an object constancy test was significantly correlated with relabeling skills. Furthermore, subjects who showed an inclination toward object classification rather than context and action classification were more flexible in dealing with words as symbols.

IV-9 Vocabulary and word identification

MORRIS, DARRELL. Beginning readers' concept of word. In Edmund H. Henderson and James W. Beers (Eds.) *Developmental and Cognitive Aspects of Learning to Spell: A Reflection of Word Knowledge*. Newark, Delaware: International Reading Association, 1980, 97–111.

Assesses 21 first-graders' concept of a word. All children were administered two tasks in early October, assessment of a concept of word and a phoneme segmentation task. They were also given one task in December, a test of their ability to read in isolation 25 words randomly selected from their basals. The word concept task consisted of five steps and four scores: (1) the children were taught to recite one of two four-line poems; (2) children read aloud each line while pointing to each word (pointing accuracy was recorded) and also located two target words pronounced for them (responses recorded); (3) children read the total poem aloud twice in conjunction with the researcher; (4) children named eight words which were pointed to in the poem (responses recorded); and (5) children read in isolation six words from the poem (responses recorded). The number of correct responses in steps 2, 4, and 5 were summed. Concept of word scores correlated with word recognition scores .89, and the partial correlation coefficient with IQ controlled was .87 (how IQ was assessed was not reported). The correlation coefficient between concept of word scores and phoneme segmentation scores was .72.

JUOLA, JAMES F.; SCHADLER, MARGARET; CHABOT, ROBERT; MCCAUGHEY, MARK; & WAIT, JOHN. What do children learn when they learn to read? In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *2*, 91–107.

Discusses the development of rapid word recognition skills as children learn to read. Reviews research on theories of word recognition, the effects of words on recognition of letter strings, and visual search tasks. In addition, a study the authors conducted is reported. There were 80 subjects, 20 each in kindergarten, second grade, fourth grade, and college. Each subject was shown tachistoscopically a letter, followed by a mask, which was followed by a 3-, 4-, or 5-letter display. The displays were words, pseudowords, or nonwords. Half of the multiletter displays contained the stimulus

letter. Speed and accuracy of the responses, to whether the letter was in the display or not, were the criteria variables. Search time decreased with age. The differences in search times for 3-, 4-, and 5-letter displays were significant only for kindergarteners. Also, only the kindergarteners' search speeds did not differ for words, pseudowords, or nonwords. Decisions about the presence of the target letter were made more rapidly for words and pseudowords than for irregular nonwords for all groups except kindergarteners. Reading scores as assessed by the *Wide Range Achievement Test* showed no consistent relationship with visual search performance.

SAGI, ABRAHAM. Development of children's automatic word-processing: a re-examination. *The Journal of Experimental Education*, Winter 1980–81, *49*, 100–105.

Re-examines the developmental course of children's automatic extraction of meaning from printed words by using a recall from memory task instead of the traditional reaction time task. There were 240 subjects, equally representing second, third and fourth graders and University of Haifa students. All children were middle-class, Israeli public school pupils. Subjects were randomly assigned by age and sex to one of three conditions: words, where the names of six colors were printed in gray; colors, a set of three or four Xs, each set printed in a different color; and mixed, in which the name of a color was printed in a different color. Stimuli were printed on a white card and shown for two seconds. Subjects were told to attend to the stimuli (without being told to read or see) and that on each card there was a color. The dependent variable was the number of stimuli recalled: words, colors or both. All printed stimuli were written in Hebrew. When words and colors were presented separately (the first two stimuli sets) an equal number of words and colors was recalled, and each age group recalled a successively greater number of items. For words printed in conflicting colors (mixed set), however, more words were recalled than colors, and there were no significant differences between any of the age groups.

MCNEIL, JOHN D., & DONANT, LISBETH. Transfer effect of word recognition strategies. *Journal of Reading Behavior*, Summer 1980, *12*, 97–103.

Probes the transfer effect of word recognition strategies by comparing the word recognition test performance of 30 second-, 32 third-, and 28 fourth-grade pupils given nine lessons for 20 minutes in three word recognition strategies (graphophonic, structural, and contextual) with a like number of instructional control subjects. Results indicate that each strategy was effective in helping pupils decode words consistent with principles taught (38% increase in words recognized), but strategies tended to be specific to their respective classes of words.

FOX, BARBARA, & BAKER, ROBIN. The acquisition of grapheme-phoneme correspondences in a word learning task. *Reading Psychology*, Summer, 1980, *1*, 156–164.

Investigates the relationship between first graders' reading achievement and their ability to induce individual grapheme-phoneme associations when taught whole words written in an artificial alphabet. Subjects were 40 middle class boys and girls, 20 good and 20 poor readers. Reading was assessed with the *Metropolitan Achievement Test*, Primary I. The good readers scored significantly higher than the poor readers on the *Peabody Picture Vocabulary Test*. In Spring of first grade, the subjects were exposed in a paired association anticipation method to six consinant-vowel-consonant trigrams. The trigrams were constructed from seven artificial graphemes, each grapheme having a 1:1 grapheme-phoneme correspondence. After two consecutively correct trials on all six words or a maximum of twenty trials, the children were shown each of the sevel letter-like graphic forms and asked to report its sound. Good readers mastered

words significantly faster than poor readers, in fact, no poor reader learned all six words. Poor readers learned, on the average, only one of the seven grapheme-phoneme relations, while good readers learned approximately six of the seven.

SCHWORM, RONALD W. Word mediation and generalization in beginning readers. *Journal of Reading Behavior*, Summer 1979, *11*, 139–151.

Examines whether accelerated beginning readers learning to recognize words with and without formal instruction differ from average or low achieving beginning readers in the kind and amount of grapheme-phoneme correspondences they are able to produce. A total of 97 first graders and 80 second graders from one urban, two suburban and one rural school districts participated. Data were collected in the first few weeks of the school year. Within each grade level, children were classified as high, average, or low in reading on the basis of the Wide Range Achievement Test (WRAT). High second graders were further divided into three groups: 3.0 to 3.9, 4.0 to 4.9 and 5.0 and above. The task assessed the ability to name (say aloud) the sounds certain vowel-vowel (vv) or vowel-consonant (vc) spelling patterns presented in three formats: 1) 19 spelling patterns alone, 2) eight spelling patterns plus an ending consonant, and 3) 17 spelling patterns in non-words. Intercorrelation coefficients for the three spelling tests were high, .89 or .90. Spelling correlated with WRAT performance .85 or .86. Except for high first graders, each successively higher group on the WRAT performed significantly higher on the spelling tasks regardless of presentation format. The average spelling score of high first graders was similar to that of average second graders, but there were only nine high first graders. Previous methods of teaching reading, age, and school did not interact significantly with WRAT or spelling performance. The findings indicated that beginning readers with advanced word recognition skills may use different word mediation strategies, identify letter combinations that are rule related, and recognize spelling patterns that are defined as higher order correspondences.

ANDERSON, RICHARD C., & SHIFRIN, ZOHARA. The meaning of words in context. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 331–348.

Reviews selected empirical research on the meaning of words in context. There are four topics discussed: 1) instantiation of word meanings among adults, 2) instantiation of word meanings among children, 3) development of word semantics in context, and 4) implications of this research for teaching.

YAP, KIM ONN. Vocabulary—building blocks of comprehension? *Journal of Reading Behavior*, Spring 1979, *11*, 49–59.

Probes the causal ordering between vocabulary and comprehension skills of second- and third-grade pupils using the *Gates-MacGinitie Reading Tests*. Appropriate levels of the Gates were administered to 55 second graders and 55 third graders as pretests in October with alternate forms given in April. Pupils were selected randomly from public schools in Hawaii. Data were analyzed by five causal methods. All five causal methods produced results which supported the hypothesis that vocabulary causes comprehension and that such influence is congruent.

SCHWARTZ, ROBERT M. Resource allocation and context utilization in the reading process. *Journal of Educational Psychology*, December 1980, *72*, 841–849.

Studies in two experiments the relationship between lower level code availability and top-down contextual processing in word recognition. In the first experiment, context was manipulated at two levels in order to assess its contribution to word

recognition rate. Thirty-two undergraduates were given four short narratives (97 to 116 words) prepared in eight versions. The versions combined two types of orthography (normal and reversed), two types of passage organization (random and coherent), and two levels of framework (statement of thematic framework either present or absent). Versions were presented in lower case letters with a space after every letter and punctuation omitted. No spaces were left to indicate word or sentence units. Subjects were to draw slashes between words. Presence or absence of a framework statement had no significant main effect of any higher order interactions with other factors. Reversed orthography reduced performance significantly. Increment in performance resulting from coherent organization relative to the random passage was equivalent in both normal and reversed orthographic forms. Experiment 2 extended the investigation using one 134-word passage with 262 undergraduates. The passage used was one in which the spontaneous generation of a thematic context was unlikely. Findings of the two experiments suggested that both coherent sentence organization and framework contribute to word recognition processing of connected text.

SCHWANTES, FREDERICK M.; BOESL, SHARON L.; & RITZ, ELSBETH G. Children's use of context in word recognition: a psycholinguistic guessing game. *Child Development*, September 1980, *51*, 730–736.

Investigates the effect of varying the amount of preceding-sentence context upon the lexical decision speed of third grade, sixth-grade, and college level subjects. Within each age group level, 32 individuals participated in the first experiment and eight in the second. In the first, the stimuli were 120 nine-word sentences. All words had a readability level of third grade or below. The target word of all sentences was the final word. Twenty-four target words were replaced by pseudowords. The context lengths were constructed by varying the number of words preceding the target word. In Experiment 1 there were four context lengths: zero, two, four, or eight words. In Experiment 2, there were two context lengths, four and eight words, with 60 sentences at each context length. In Experiment 1, each target word at each context length was preceded equally often by incongruous and congruous text. Incongruous text was created by placing target words from one sentence into another sentence. In Experiment 2, only congruous text was employed. Contexts were tachistoscopically presented onto a screen (zero context was a blank slide). In Experiment 1, the task was to indicate if the exposed target was a word or a nonword. In Experiment 2, subjects were asked to predict what the target word would be after reading the four- or eight-word context aloud. Reaction time to response was the dependent variable. For each age group, the mean differences in decision time between congruous and incongruous context became greater as length of preceding context increased. Relative to a no-context condition, increasing amounts of congruous context facilitated word recognition rates for younger but not for adult readers; also increasing amounts of incongruous context interfered with word recognition rates for younger but not for adult readers. In Experiment 2, it was found that generating correct versus incorrect predictions of the target item had a much greater effect on the lexical decision speed of third graders relative to adults.

MERRILL, EDWARD C.; SPERBER, RICHARD D.; & MCCAULEY, CHARLEY. The effects of context on word identification in good and poor readers. *The Journal of Psychology*, November 1980, *106*(2nd half), 179–192.

Employs a semantic priming procedure in two experiments to test the hypothesis that children differing in word-decoding skill differentially use context to facilitate word identification. In both experiments, subjects were 14 good readers and 14 poor readers; identified on the basis of performance on the *Stanford Achievement Test*. In both experiments, children were shown pairs of stimuli, a prime followed by a target,

with instructions to read the target as rapidly as possible. Experiment 1 used both picture and word stimuli. The line drawn pictures and the words were paired (prime to target) to be semantically related or semantically unrelated. In Experiment 2, the stimuli were words primed by a sentence in which the word was or was not contextually acceptable. For both single-word and incomplete-sentence primes, targets in related pairs were read faster than those in unrelated pairs, with larger facilitation effects being obtained with the incomplete-sentence primes. However, the magnitude of these context effects did not vary as a function of word-decoding skill. The findings suggested that differences between good and poor readers in word-decoding skill are not necessarily related to differences in the ability to extract and utilize the semantic content of written material.

JUEL, CONNIE. Comparison of word identification strategies with varying context, word type, and reader skill. *Reading Research Quarterly*, 1980, *15*, 358–376.

Investigates the extent that good, average, and poor readers in second and third grade identify words of varying difficulty by a text driven (decoding or sight recognition) or a concept driven (context clues) method. The 72 subjects were drawn from a middle class Texas school. They were classified as good, average, or poor readers by their classroom reading group assignment, group performance on the *California Achievement Test*, and score on a graded word list. All subjects had IQs between 96 and 120 on the *California Test of Mental Maturity*. There were 40 target words representing the eight possible combinations of the three experimental word factors: decodability (easy hard), number of syllables (one two), and word frequency (high low). The target words were presented to the subjects in three conditions: 1) isolation, 2) sentences with no contextual clues to aid in recognizing the word, and 3) sentences with moderate contextual clues to aid in word recognition. The dependent variable was number of target words read correctly. Using a .01 significance level, good readers' performance on all eight types of words generally varied very little within the three conditions. Average readers' performance fluctuated, with increased accuracy in moderate context for some classes of words and not for others. Poor readers identified nearly all classes of words more accurately in poor context and even more accurately in moderate context.

LIU, IN-MAO. Acquisition of word meaning through paraphrases. *American Journal of Psychology*, March 1980, *93*, 119–133.

Theorizes that a person acquires the meaning of a word even when that meaning is expressed by varying paraphrases. The subjects of the first experiment were 80 third graders (presumably Chinese or Taiwanese) who were taught 12 new words (Chinese) from sixth-grade text books. For each word, more than 10 definitions were obtained by consulting various dictionaries. Each definition was shortened to one short (two or three Chinese characters) paraphrase or idea unit. On the basis of word frequency, a group of three paraphrases was selected for each word. All children were tested on the meanings of the 12 words. Then 40 experimental subjects studied only the 36 paraphrases for 5 minutes, that is, there was no direct association between the word and the paraphrases. The 40 control pupils rested for five minutes. After the five minutes, both groups were again tested on the word meanings. Both groups improved significantly, but the experimental group improved by more than twice as much. The author concluded that familiarizing students with various meanigs of a word via paraphrases of that meaning and without naming the word, bridges the gap between the word and its meaning and leads the student to understanding the word's meaning. The purpose of Experiment 2 was to test the effects on learning word meanings of paraphrases that vary in their degree of specificity. A pair of paraphrases was constructed for each of 10 words (by procedures similar to Experiment 1): one paraphrase

being specific (e.g., a paraphrase for "flying" in the meaning "a flying animal" for the word "bird"), and one paraphrase being the main paraphrase (e.g., a paraphrase for "animal"). In addition, a complete definition of each word was constructed. Subjects were 120 fourth graders, divided randomly into three equal groups. All groups were tested on the meanings and pronunciations of the 10 words. On each of the three trials, all three groups were shown the word, the phonetic transcription of the word, and one of three sets of two lists: 1) the specific paraphrases and the complete word meanings, 2) the main paraphrases and the complete word meanings, or 3) the complete word meanings shown twice. Although all three groups gained significantly in meanings and pronunciations learned, there was no significant difference between the three groups. Groups learning paraphrases and pronunciations appear to learn word meanings as readily as groups taught pronunciation and the entire word meaning.

TEMPLETON, SHANE. Spelling, phonology, and the older student. In Edmund H. Henderson and James W. Beers (Eds.) *developmental and cognitive aspects of learning to spell: A Reflection of Word Knowledge*. Newark, Delaware: International Reading Association, 1980, 85–96.

Examines the question of whether awareness of sound patterns precedes and is necessary for knowledge of spelling patterns, or vice versa. The phonological aspect of the study was the alternation from a long vowel in a root word to a short vowel when a suffix is added (e.g., profane to profanity). Good spellers in sixth, eighth, and tenth grades, 20 per grade, were randomly assigned to two conditions: 1) each was shown a base word plus a suffix and asked to pronounce the resulting derived word; 2) the base word was pronounced for the subject while the suffix was visually presented. Half the words were presented in isolation and half were presented in written context. In both conditions, the dependent variable was the spelling and pronunciation of the word. Stimuli were 12 real words and 12 pseudowords. Correct pronunciation was equal in both conditions, but correct vowel alternation was greater for real words than for pseudowords. Spelling performance was significantly better for words presented in context than for words presented in isolation. The correlation between spelling and vowel alternation was minimal. The results suggested that orthographic structure may often precede higher order phonological knowledge and that orthography should be the basis for logical analysis of word-level phonology and semantics.

EHRI, LINNEA C., & WILCE, LEE S. The influence of orthography on readers' conceptualization of the phonemic structure of words. *Applied Psycholinguistics*, November 1980, *1*, 371–385.

Examines whether children's conceptualization of the component sounds in words is influenced by their knowledge of the word's spelling. In Experiment 1 and Experiment 2, subjects were two different groups of 24 middle class fourth graders. All children were able to decode words at least through the fourth grade level on the *Interactive Reading Assessment System* vocabulary test. Experiment 1 was designed to test the relation between spelling knowledge and phonemic segmentation of seven pairs of words selected so that each pair shared the same target phoneme, but the spelling of one phoneme contained an extra grapheme (e.g., the phoneme /č/ in pitch and rich). In Experiment 1, children had two tasks in response to a pronunciation of the words: 1) segmentation, in which they laid down a chip for each sound in the word while saying that sound, and 2) spelling the word. The extra sounds were frequently given in the extra letter condition (e.g., pitch), but rarely in the control condition, (e.g., rich). Spelling in the control condition was nearly perfect and significantly better than the extra letter condition. Knowledge of spelling did influence segmentation. The purpose of Experiment 2 was to determine if the way readers conceptualize their sound structure depends upon which sounds they see symbolized in the spelling of identically pronounced words. The materials of Experiment 2 were five nonsense words created as

names for animals. Each word had two spellings, one of which contained an extra letter (e.g., sim*p*ty - simty). The 24 pupils were divided into two groups, one learning to read the extra letter set and the other learning to read the control set. After learning to read the words perfectly, phonemic segmentation and spelling tasks similar to those in Experiment 1 were administered. Every extra-letter child included two-to-five extra-letter sounds in his her segmentations, but only two control children had extra sounds. It was concluded that the readers' conceptualization of the phonemic structure of words is influenced by their knowledge of word spellings.

DREWNOWSKI, ADAM. Missing *-ing* in reading: developmental changes in reading units. *Journal of Experimental Child Psychology*, February 1981, *31*, 154–168.

Presents a series of short reading passages to adults (Experiment 1) and children (Experiment 2) in which subjects search the materials for the letter "n." Previous research has shown that reading ability is significantly and positively correlated with the number of errors in finding "t" in "the" and finding "n" in the morpheme "ing." It is hypothesized that the reason for this is that better readers process graphic stimuli in larger visual or morphemic units. The purpose of this study was to monitor the acquisition of such processing units in learning to read. Experiment 1 was conducted to determine if the missing letter effect for the "-ing" morpheme could be replicated using short search passages which would be suitable for school children. The subjects of Experiment 1 were 42 Canadian college students. They searched four 50-woed passages for the letter "n." The first passage (prose) had 18 words with "n" in varying categories of words. The second passage (prose-mixed case) was the same as the first, except that alternating letters were typed in upper and lower case. The third (scrambled word) and fourth (scrambed letter) passages were the same as the prose and prose-mixed case passages respectively, except that alternating letters were typed in upper and lower case. The third (scrambled word) and fourth (scrambled letter) passages were the same as the prose and prose-mixed case passages resprctively, except the order of the words not containing "n" or letters other than "n" were scrambled. Higher error percentages were found for the two function words "and" and "in" than for text content words in prose passages. The number of errors was significantly reduced by each of the other passage formats. Subjects made more errors on two-syllable words ending in "ing" than any other type of word. The subjects of Experiment 2 were 234 pupils in grades one through five in a Toronto school. The same passages used in Experiment 1 were used in Experiment 2. The missing letter effect showed a developmental trend, as the proportion of errors in "and" and "in" and in two-syllable words ending in the morpheme "ing" increased as a function of grade level. Errors were significantly decreased across grades in the scrambled letter format.

STRANGE, MICHAEL. The effect of orthographic anomalies upon reading behavior. *Journal of Reading Behavior*, Summer 1979, *11*, 153–161.

Attempts to determine if the perceptual unit in reading for good readers is the letter or some larger unit. A total of 46 fifth- and sixth-grade children, identified as reading at or above grade level on the basis of teacher judgment, was used. Seven 350-word passages were selected from a basal series. One passage was used to collect data on normal reading speech while the others were treated systematically to represent an orthographic anomaly appearing in the beginning, middle, or ending of words. Orthographic anomalies were further divided into major and minor categories. Reading for each passage was timed. Anomalized passages were read less rapidly than non-anomalized passages. Anomalies in the final position were less disruptive than anomalies in the beginning or medial position. No differences were noted between major and minor anomalies or between anomalies in middle and beginning positions.

CLARK, CHARLOTTE R. Learning words using traditional orthography and the symbols of Rebus, Bliss, and Carrier. *Journal of Speech and Hearing Disorders*, May 1981, *46*, 191-196.

Compares the learning of words represented in traditional orthography (T.O.) and in the logographic symbols of Rebus, Bliss, and Carrier. Thirty-six preschool children, ages 4.3 to 5.4 and with mental ages from 4.3 to 5.6, were presented a task requiring the learning of 15 words in one of the four graphic conditions. The nine children in each group were first shown a stimulus page, told the word or words, and asked to repeat them. They were then shown a response page and asked to identify a word as it was pointed to. One the final response page, all 15 words were to be identified. The results showed that the logographic symbols as a group were significantly easier to learn than T.O., the partially iconic systems of Rebus and Bliss were significantly easier to learn than the Carrier symbols, and Rebus symbols were significantly easier to learn than Bliss symbols. Presents implications for the instructional use of logographic systems.

LYNCH, P. P., & PATERSON, R. E. An examination of gender differences in respect to pupils' recognition of science concept definitions. *Journal of Research in Science Teaching*, July 1980, *17*, 307-314.

Studies the effect of gender on recognition of simple definitions of 16 concept words in science. Subjects consisted of 969 boys and 666 girls drawn from grades seven through ten in six Tasmanian high schools. Responses were analyzed and are presented for each word. Recognition accuracy differed significantly for individual words by all subjects and for comparisons of seventh and tenth grade performance. Detailed recognition differences are described by individual word and word groups.

GRAVES, MICHAEL F.; BOETTCHER, JUDITH A.; PEACOCK, JUDITH L.; & RYDER, RANDALL J. Word frequency as a predictor of students' reading vocabularies. *Journal of Reading Behavior*, Summer 1980, *12*, 117-127.

Probes the relationship of word frequency as a predictor of student reading vocabulary for 432 seventh-through twelfth-grade students in a midwestern suburban school system. Test booklets presented 86 words in the form of simple context items with five M-C responses to choose from. Words chosen represented 1000-word stratifications from the 86,000 *Word Frequency Book*. A five factor factorial design was employed. Results indicate that correct responses decline at a regression slope of −.47 as words occur in lesser frequency in general usage, but the relationship between word frequency and subject word knowledge was modest (r = +.44). Significant differences were obtained for grade and ability, but not for sex.

VENEZKY, RICHARD L., & MASSARO, DOMINIC W. The role of orthographic regularity in word recognition. In Lauren B. Resnick & Phyllis A Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *1*, 85-107.

Argues that fluent readers must be able to identify words rapidly and that an awareness of orthographic regularity is important for this rapid word identification. Research concerned with the role orthographic regularity plays in the recognition of letters, nonwords, and words is reviewed; the role of phonics instruction on the development of word recognition is examined; and a model of word recognition is presented.

CALDWELL, EDWARD C.; NIX, DON H.; & PECKHAM, PERCY D. Higher-order units in reading instruction. *Contemporary Educational Psychology*, April 1981, *6*, 127-134.

Reports preliminary findings of a computer analysis of the most frequent 18,000 words in English and of the 1,014,232 words of the Kucera-Frances list. The premise of the study was that the most appropriate unit of beginning reading instruction might be higher-order (than words or letters) units determined from examining grapheme-phoneme correspondence. The purpose of the computer analysis was to search for higher order letter strings that might be useful in reading instruction. The 18,000 words were words on the Kucera-Frances list that appeared three or more times. All letter strings from two to seven letters in length (ngrams) were output with all the words in which the ngram appeared printed beneath the ngram. In addition, type and token frequencies of each ngram were calculated and printed in separate rank order and alphabetic lists. Preliminary analysis of the consistency of mappings of various ngrams suggested that many are potentially useful for reading instruction. Current research with the computer is designed to extend the preliminary analysis.

HILLERICH, ROBERT L. Recognition vocabularies: a research-based caution. *Elementary School Journal*, May 1981, *81*, 313–317.

Compares the ability to read base words and their inflected forms for 54 average readers in grade four and 56 poor readers in grades six through nine. All subjects were judged by their teachers to be reading at about fourth grade level. They read 87 words presented in four random orders on four different days. Included in these 87 words were 15 sets of base words and their inflections. The ability to read one form of the word was not necessarily indicative of the ability to read other forms. Also, there was no direct relationship between the frequency of a word in the English language (as indicated in the *American Heritage Word Frequency Book*) and its probability of being read accurately. Generally, fewer errors were made on the base form than on the inflected form. The total number of errors diminished from 680 to 468 across the four forms.

MCCORMICK, CHRISTINE, & SAMUELS, S. JAY. Word recognition by second graders: the unit of perception and interrelationships among accuracy, latency, and comprehension. *Journal of Reading Behavior*, Summer 1979, *11*, 107–118.

Investigates two issues: the relationship among accuracy and latency of word recognition and comprehension by non-fluent readers, and whether component letter or holistic processing was used in word recognition by these same readers. Speed and accuracy of word recognition were measured on individual words. Literal comprehension was measured by the relation between latency of word recognition and word length. The 69 first grade and 87 second grade words used as stimuli were each different word on 1) the grade one and two passages of the *Gray Oral Reading Test* 2) the reading comprehension section of the *SRA Achievement Series*, grades 1–2. Words were projected individually onto a screen. The words in context passages were the same Gray and SRA passages. Gray Oral stories were read orally and SRA stories were read silently. Comprehension was assessed by free recall and literal comprehension questions. Word recognition accuracy and latency were each significantly related to comprehension for both first- and second-grade words. Latency influences comprehension scores to a greater extent on the first-grade words. With regard to the unit of perception, in general there was evidence of component letter processing for all subjects with the highly accurate readers showing a tendency towards more holistic processing.

LAROCHELLE, SERGE; MCCLELLAND, JAMES L.; & RODRIGUEZ, ELIZABETH. Context and allocation of resources in word recognition. *Journal of Experimental Psychology: Human Perception and Performance*, November 1980, *6*, 686–694.

Investigates the effects of context on the use of limited processing resources in word recognition. The subjects of the three experiments were 12, 12, and 40 undergraduates. On each trial in all of the experiments, the subjects were presented

with an incomplete sentence followed by a target display containing a word and two digits. All sentences, target words, and numbers were tachistoscopically presented. In Experiment 1, subjects reported the words, then digits; in Experiment 2, they reported digits then the word; and in Experiment 3, they reported either digits or the word. The effect of context on processing resources was examined by considering the accuracy of reports of the digits in cases in which the word did or did not fit the context. In all cases, accuracy at reporting the word was affected by context, as expected. Accuracy of digit report was greater for digits surrounding words in related context, but only when the subjects were required to report the word before reporting the digits. There was no effect of word context on the digit report when subjects had to report the digits first. There was likewise no effect on accuracy of digit report when subjects were required to report only the word or only the digits, even when the cue was presented 250 msec after the target display was replaced by a patterned mask.

KOLKER, BRENDA, & TERWILLIGER, PAUL N. Sight vocabulary learning of first and second graders. *Reading World*, May 1981, *20*, 251–258.

Examines the effects of imagery on the rate of learning sight vocabulary words for 45 first grade pupils and 53 second grade pupils. All children were first pre-tested on the 147 AA words on the Paivio, Yuille and Madigan list of 925 nouns. The purpose of pre-testing was to find words that each child could not read but could define. These words were then presented to the child, six per day for a period of 15 days. Words were presented until the child could identify them correctly on three consecutive training trials, one short term retention (24 hour) trial and one long-term retention (48-72 hours) trial. Words identified correctly on all such trials were retired and new words took their place. Number of words learned and number of trials to learn words were recorded. The words taught were then classified as high imagery or low imagery words. For both first and second graders, high imagery words were learned in fewer trials. Second graders learned more words and learned words in fewer trials than first graders.

EHRI, LINNEA C., & WILCE, LEE S. Do beginners learn to read function words better in sentences or in lists? *Reading Research Quarterly*, 1980, *15*, 451–476.

Explores the effects of teaching beginning readers to learn 10 function words taught in isolation or in context. Twenty pairs of middle class first graders were matched on ability to read the 10 words to be taught in the experiment. Children were also administered five other measures of beginning reading skills. Although not matched on these skills, they differed significantly on only one (letter naming). Half the children were taught to read the words in the context of three written sentences for each word; half were taught the words in isolation (lists) and then listened to the same sentences used in the context method. All pupils were also taught before the experiment began, the 47 supplementary words used for forming the context sentences. Many of these words were paired with pictographs depicting the meaning or sound of the word. Over four trials, children read the sentences and target words or read the target words in random lists and then listened to the sentences. Varying tasks focused attention on the meaning of the sentence were employed over the four trials. All mistakes on target and supplementary words were corrected. Several post test measures were given. The isolation group excelled on most posttests: spelling, recognition of spelled words, identification and speed of identification of target words and supplementary words, and word recognition gain from pretest to posttest. The context group excelled on two posttests: constructing sentences (orally) using the target word and detecting the word in orally presented sentences. There was no sentence reading posttest. In an anagram test (constructing sentences from printed words presented in random order), the two groups did not differ. The authors conclude that there are multiple aspects of printed words to be learned by beginning readers and that the method by which words are taught affects which aspect is learned.

BAUMANN, JAMES R.; WALKER, ROBERT N.; & JOHNSON, DALE D. Effect of distractor word variability in children's performance on a word identification test. *Reading Psychology*, March 1981, *2*, 88–96.

Examines pupils' performance on multiple choice word identification tests when the distractor items vary in graphic similarity to the target words. There were 251 subjects: 73 second graders, 105 third graders and 73 fourth graders. The same 30 words were presented to children as a word identification test in three formats in which the distractor words were 1) graphically similar, 2) graphically dissimilar or 3) a comgination of 50% graphically similar and 50% graphically dissimilar. At all three grade levels, pupils performed significantly better on the graphically similar one. At the second and third grades, the combined form was also significantly more difficult than the graphically dissimilar form.

ROSSO, BARBARA RAK, & EMANS, ROBERT. Children's use of phonic generalizations. *The Reading Teacher*, March, 1981, *34*, 653–658.

Studies the relationship between pupils' ability to apply word recognition generalizations and reading achievement using fourth graders, 61 girls and 71 boys. Two standardized tests were administered: the *Stanford Diagnostic Reading Test*, the *Henmon-Nelson Tests of Mental Ability*. Two experimenter constructed tests were also administered: a Word Recognition Generalizations Test (WRGT) and an Oral Test of Word Recognition Generalization (OWRGT). Both tests assessed pupils' knowledge of phonics rules. The oral test was administered only to a random group of 30 children. The WGRT significantly correlated with six of the eight subtest scores of the Stanford (covarying on IQ), with significant coefficients ranging from .23 (for two different comprehension subtests) to .60 (for the sound discrimination subtest). WGRT did not correlate significantly with vocabulary or reading rate. The 30 OWRGT children were asked to state the rules for words they sucessfully decoded. In general, most students could verbalize only a minimal number of rules, in spite of their ability to decode the word correctly.

SPRING, CARL; GILBERT, NANCY; & SASSENRATH, JULIUS. Learning to read words: effects of overlearning and similarity on stimulus selection. *Journal of Reading Behavior*, Spring 1979, *11*, 69–71.

Provides over-learning trials on a dissimilar-words list to equal the additional trials required to learn a similar-word list to note if this would result in comparative over-generalization errors on a transfer task and a letter recognition task. Subjects were 48 kindergarteners assigned to one of three conditions: similar-words list, dissimilar-words list, and overlearning of dissimilar-words list. The similar list consisted of four words all with the same four letters; the dissimilar list consisted of four words composed of different letters. The recognition transfer task consisted of the training words and two variations of each. The letter recognition transfer task consisted of single words, each differing from its corresponding training word by one letter. Training by the anticipation method continued for the similar and dissimilar groups until a criterion of one perfect trial. For the overlearning of dissimilar-words list, children received additional trials to equal one-half the trials needed to reach criterion. The overlearning and similar groups did not differ on over-generalization errors, but both made fewer errors than were made by the dissimilar group.

WEST, RICHARD F., & STANOVICH, KEITH E. The development of automatic word recognition skills. *Journal of Reading Behavior*, Fall 1979, *11*, 211–219.

Examines the relationship between reading ability and automatic processing of print. Subjects were 24 kindergarteners, 24 first graders and 24 third graders from one middle-school. On the *Wide Range Achievement Test*, the average reading score for children in each successive grade was 1.1, 2.2, and 4.8. Verbal stimuli were the 26

letters of the alphabet, 26 high-frequency words, and 26 low frequency words. These stimuli were mounted on red, yellow, blue or green slides. Preceding each visual presentation of a stimulus, children were presented with one of the verbal stimuli. The task was to identify the color of the slides, on which the verbal stimuli matched or did not match the verbal stimuli being held in memory. Reaction time to identification of the color was the dependent variable. There was a developmental trend toward the color being named faster when the stimulus matched the iten: held in memory. While the color-naming times of the first- and third-graders did not depend on stimulus type, the kindergarteners named colors slower when the stimuli were letters and showed a tendency to respond slower to high-frequency words than to low-frequency words. The authors argues that the kindergarteners had fully automated the recognition of only the letters and were beginning to automate the recognition of high-frequency words. In contrast, the older children had automated the recognition of letters, high-frequency words, and low-frequency words to an equal extent.

McCusker, Leo X.; Gough, Philip B.; & Bias, Randolph G. Word recognition inside out and outside in. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 538-551.

Conducts six experiments to test empirically one independent parallel model of word recognition. Twelve to 17 college students served in each of the six experiments. The stimuli in all six experiments were four letter words, tachistoscopically exposed. Predictions for word recognition latencies were generated for the model based on the letter-naming latencies in two display conditions. In one condition, the inside two letters of the four-letter words were presented 50 msec in advance of the presentation of the whole word, whereas in the other condition, the outside two letters were presented 50 msec in advance. The model predicts that the two conditions should yield roughly equal recognition latencies, but actually the prior presentation of the outside letters led to faster recognition. The implications of these results for the family of parallel models were discussed.

Shanon, Benny. Lateralization effects in response to words and non-words. *Cortex*, December 1979, *15*, 541-549.

Asks 16 native English speaking Hebrew University students to judge whether items presented to them were words or not. In the first of two experiments, responses to nouns and verbs were compared; in the second experiment, responses to concrete and abstract nouns were compared. Half the items were presented to the right visual field and half to the left. In both experiments, responses to pronounceable and non-pronounceable words were also studied. No interactions were found between field of presentation and word class. Pronounceable non-words elicited longer response times and higher error rates than unpronounceable words.

Ryder, Randall J., & Pearson, P. David. Influence of type-token frequencies and final consonants on adults' internalization of vowel digraphs. *Journal of Educational Psychology*, October 1980, *72*, 618-624.

Presents data from two experiments investigating the relationship between type and token frequencies and graphemic context effects. In the first study, 51 undergraduates were asked to read silently 24 synthetic words, six each based on four vowel digraphs. They were then asked to select from four real-word alternatives, the word containing the same sound as the vowel digraph displayed in the synthetic word. Three models were used to predict pronunciation responses: a final consonant model, a type-token model, and an invariant principal response model. In the second experiment, 36 undergraduates pronounced each of the 24 synthetic words. The findings supported the final-consonant model as the most accurate predictor of pronunciation in either the production or the recognition task. Implications for an instructional program with children are presented.

IV-10 Factors in interpretation

BLACK, JOHN B., & WILENSKY, ROBERT. An evaluation of story grammars. *Cognitive Science*, July/September 1979, *3*, 213–230.

Evaluates the "story grammar" approach to story understanding from three perspectives. (1) Examined from a formal properties view, particularly for capability of full-scale transformation, only the Johnson and Mandler model is assessed as adequate. (2) Against empirical criteria, story grammars are found unable to generate all stories, and do generate one major class of nonstory; i.e., procedural expositions. (3) Evaluated from a comprehension model building set, story models appear to add nothing to semantic models that focus on story content. Draws conclusion that content oriented approaches to story investigation are a more profitable direction than structural story grammars.

MANDLER, JEAN M., & JOHNSON, NANCY S. On throwing out the baby with the bathwater: a reply to Black and Wilensky's evaluation of story grammars. *Cognitive Science*, July/September 1980, *4*, 305–312.

Critiques Black and Wilensky's criticisms of story grammar. Three arguments are discussed: 1) that the criticism takes a narrow view of story grammar; 2) that the criticism that children cannot learn transformational grammars is misrepresented, and 3) that the criticism that a context-free grammar cannot handle discontinuous elements is not proven. Counterevidence from the research literature is cited.

RUMELHART, DAVID E. On evaluating story grammars. *Cognitive Science*, July/September 1980, *4*, 313–316.

Critiques Black and Wilensky's criticisms of story grammar. First the author clarifies the nature of story grammar, then clarifies the nature of those points of Black and Wilensky's arguments about story grammar that he feels they misunderstood, and concludes by discussing how each of their three arguments fails to address the important issues about story grammar.

TOWNSEND, MICHAEL A. R. Schema activation in memory for prose. *Journal of Readirg Behavior*, Spring 1980, *12*, 49–53.

Compares the influence of appropriate, inappropriate, or no written contextual information conditions as applied to two ambiguously written passages about familiar topics provided for 48 undergraduate psychology students who listened to the passages. Following an interpolated activity, written recall was obtained. A significant main effect was registered for the context condition ($p < .001$). Greater recall was generated for the two context situations than for the no context or inappropriate context. General order of discriminant power was: appropriate context prior, appropriate context after, no context, and lastly, inappropriate context.

COOPER, CHARLES A., & MICHALAK, DARLEEN A. A note on determining response styles in research on response to literature. *Research in the Teaching of English*, May 1981, *15*, 163–169.

Seeks to determine the most valid means to identify response style using a framework organized around the basic stances readers can assume towards a work: interpreter, evaluator, describer, personalizer. Previous research using the students indicated that only 12 of them showed the same preferred mode of response on each of three measures: essay analysis, Response Preference Measure, and statements analysis. A critique of the latter two assessment devices is given. The authors recommend essay analysis as the most valid of the presently used measures as it involves viewing the whole response, thus giving it greater construct and face validity.

BECHERVAISE, NEIL E. Response to literature for what? A brief blasphemy against the lack of effect of research into literary response on classroom practice. *English in Australia*, December 1980, No. 54, 15–18.

Maintains that all previous research on students' reading habits has been of little value because the variables these researchers study are mundane. The writer challenges researchers by proposing what he calls a blasphemy: reading is a useless activity. Additionally, it is stated that unless researchers accept this hypothesis, they have little probability of ever conducting research that will help English teachers develop appropriate literary experiences for their students.

YUSSEN, STEVEN R.; MATHEWS, SAMUEL R., II; BUSS, RAY R.; & KANE, PATRICK T. Developmental change in judging important and critical elements of stories. *Developmental Psychology*, May 1980, *16*, 213–219.

Assesses children's awareness of the three aspects of a story thought to be the most essential to understanding it: 1) initiating events (IE), 2) actions (A), and 3) consequences (C). Two experiments were conducted. In the first experiment there were 18 pupils in each of grades two, four, and six, and 15 college students. Each subject read (and heard on a cassette tape) four short stories, each constructed after a story grammar. Each story included a setting, initiating event, internal response, attempt, consequence, and reaction. After reading the story, subjects identified the three sentences of the story they thought most critical and the three sentences most necessary to communicate the gist of the story to a friend. The dependent variable was the proportion of choices including only IE, A, and C. The likelihood of picking these three components increased from .06% (chance) to approximately 24% from grades two to six. Adults responding to the question, what is most critical for communication, selected these three components 50% of the time. In Experiment 2, there were 22 second graders and 23 fifth graders. They read eight stories similarly constructed to or the same as those in Experiment 1. Again, the task was to select parts of the story they thought most critical in communicating the story to a friend. But this time, children selected one, two, three, or four more parts from each of four pairs of the stories. Pupils were also required to recall two of the stories. When second graders chose one, two or three parts of the story, the proportion of times an IE, A or C category was selected did not significantly differ from chance. At both grades, recall of the key categories was higher than recall of the other categories. Fifth graders also recalled a greater number (marginally significant, $p < .05$ of key categories than second graders. It was concluded that there is a developmental process in young childrens' basic sense that a simple story can be conveyed by knowing IE, A and C.

GROEBEN, NORBERT. Empirical methods for the study and interpretation of literature. *Discourse Processes*, October/December 1980, *3*, 345–363.

Presents a critical review of the theory and research pertinent to postulates and methodology helpful in empirically reorganizing the domain of literary studies. Semantic categorization and semantic differential were used to test the agreement between concepts from a literary text and from four variously oriented scholarly interpretations. The sample investigation utilized a nonspecified population of university subjects, ages 20 to 40. Results suggest that differential analysis provides greater potential for literary text analysis than does correlational analysis.

ROBBINS, LOUISE DUNBAR. Critical reading skills of nonproficient readers in college. *Journal of Reading*, January 1981, *24*, 300–303.

Investigates the criteria used by 22 nonproficient community college readers when reading critically to evaluate the usefulness of expository passages as a source of information for a research report. All students had scored at or below the fourth

stanine on the *Stanford Diagnostic Test*, Level III, and were enrolled in a reading improvement course. Subjects were given a 250 word cloze test from each of three sources. Then they were asked to read 1000 word passages in complete form from each of the three sources, to select the one which they felt was the best source of information, and to list the criteria used to evaluate the passage selected. Responses were classified according to six categories of criteria. Scores on the cloze test over the freshman level sociology text reflected frustrational performance for 21 of the 22 subjects. Passage readability ranged from ninth to fifteenth grade on the Fry scale. The appropriate support passage was selected by seven of the 22 subjects and was rated at eleventh to twelfth grade readability. Students used a wide variety of criteria to make their choice. The two most frequent categories of criteria used were specific information and personal-subjective feeling.

SINGLETARY, MICHAEL W., & CARRAGEE, KEVIN. Subjective errors in written messages. *Journalism Quarterly*, Autumn 1980, *57*, 432–437.

Investigates the responses of ten groups of undergraduate subjects to subjective errors (logic, word use, and omission) in written communication when the errors were systematically increased. A total of 216 subjects, including 22 controls, read the essay to determine if the contents became less favorable and less credible and if recall of the content declined as the number of errors increased. After reading the selections, the subjects completed a questionnaire about the logic, quality, amount of information, suitability of language, and overall rating of the essay. Semantic differential type scales were used for nine items dealing with credibility. The subjects answered factual questions and underlined errors. The content evaluations became increasingly negative and peaked at the 21-error level. Source credibility declined but not so distinctly as message evaluation. No group came close to identifying all the errors.

BRUNO, KRISTIN J. Discrimination of assertions and implications: a training procedure for adults and adolescents. *Journal of Educational Psychology*, December 1980, *72*, 850–860.

Describes and tests in two experiments a training procedure to teach the discrimination of implication from asserted fact during auding. Subjects involved 32 university students in the first study and 32 seventh- and ninth-graders and 32 university psychology students in the second. With minor procedural adjustments and subject increase, the second study replicated the first. The experimental or training group received short term (15 minute) instruction and practice in identifying and differentiating implications from assertions. Pre- and posttesting was based on listening not reading. Results revealed margnal improvement in discrimination.

RYAN, MICHAEL P., & HURTIG, RICHARD R. Does the structure of the evidence base "cause" verdicts of guilty and innocent? *Discourse Processes*, July–September 1980, *3*, 231–261.

Compares the evidence (facts) base used by eight mock jurors who reached a guilty decision and six mock jurors who reached an innocent decision in a malpractice suit. Subjects of the experiment were 14 paid undergraduates. On Day I, subjects read a paragraph containing 12 facts about a malpractice suit and completed a verdict questionnaire which required of them a guilty-innocent verdict. They then studied the facts and completed two recall tasks of the facts. They were then given a deck of 66 computer cards, each containing a pair of facts from the case and were asked to rank order each pair of facts in terms of how related they were to each other. This ranking procedure provided the distance data for INDSCAL and HICIUS. On Day II, another fact recall task, verdict questionnaire, and rank-ordering task were completed. Subjects then were asked to simulate how someone favoring the opposite verdict would have

completed the questionnaire and then did the rank-ordering task for that opposite verdict. Last, they again completed the verdict questionnaire for their own decision. Solutions for the relatedness rankings of the 12 evidence elements for the two groups of undergraduates were virtually indistinguishable at both sessions. Verdict-related differences between the mock jurors only emerged in response to instructions at the second session to simulate the evidence base of members of the opposite verdict group. These data imply that jurors arriving at different verdict conclusions differ in the way they compute verdicts from a common evidence base rather than in the structure of their evidence bases.

DREYFUS, A., & JUNGWIRTH, E. Students' perception of the logical structure of curricular as compared with everyday contexts—study of critical thinking skills. *Science Education*, July 1980, *64*, 309–321.

Presents findings for responses and response defense of 344 ninth-grade pupils in Israeli high schools on four tests assessing critical thinking pertinent to the use of eight logical fallacies. The tests were constructed to compare responses based on biological subject matter, parallel life situations, and the influence of nonsense words in key positions. IQ and reading comprehension tests were administered, and the sample was divided into two equated groups. Correct choices were low in all tests (44 to 56%), but higher for the life situations tests. The correlations for IQ, reading comprehension, and correct test response were significant ($p < .01$) but low positive (r's=.21 to .46). The brevity of the critical thinking tests produced relatively low reliability (.56 to .70). Analysis of reasoning given in defense of responses is reported. In general, test form had little influence on logical explanation, and "correct choices" were notably larger than "logically sound" explanations given for response.

GARNER, RUTH. Monitoring of passage inconsistency among poor comprehenders: a preliminary test of the "Piecemeal Processing" explanation. *Journal of Educational Research*, January/February 1981, *74*, 159–169.

Studies the reading and rating performance of fourteen boys and six girls, all fifth or sixth graders reading one or more years below level on three short passages. All subjects were enrolled in a college summer reading clinic and had identified their own reading problem as that of comprehension rather than decoding difficulty. Five sentence passages were systematically modified to present informationally consistent, informationally inconsistent, and addition polysyllabic modifying words to informationally consistent passage. Each subject read one of the three forms on one of the three topics in a counterbalanced presentation. Subjects rated comprehensibility of passage and made recorded responses concerning why passage was difficult. No significant differences were observed between the consistent and inconsistent passages, but the polysyllabic word modified passages were viewed as more difficult at $p < .001$ significance. Difficulty of these longer words was cited as reason for passage difficulty.

GARNER, RUTH. Monitoring of understanding: an investigation of good and poor readers' awareness of induced miscomprehension of text. *Journal of Reading Behavior*, Spring 1980, *12*, 55–63.

Describes and analyzes a study of the editing performance of 15 "poor" and 15 "good" seventh- and eighth-grade reading comprehenders who read two fifth-reader level passages which were presented either in near original (consistent) form or in a modified inconsistent meaning form. After reading each of four sections into which the passage was divided, the subjects were asked to identify whether that section was "easy," "O.K.," or "difficult" to understand, and then to explain what caused any difficulty noted. ANOVA analysis was made by material x segment x reader. All main effects and interactions were statistically significant. Good readers rated more passages

easy to understand than poor readers ($p < .01$). Material effects were significant ($p < .01$), in that all subjects rated more unaltered segments easier to understand, but reader-material interactive differences ($p < .01$) occurred because poor comprehenders made little distinction between difficulty of consistent v.s. inconsistent segments.

SPEARRITT, DONALD. Measuring reading comprehension in the upper primary school. *Australian Journal of Reading*, June 1980, *3*, 67–75.

Reports the results of a factor analysis of the scores of 15 different measures of reading comprehension. The 15 tests of reading comprehension measured various facets of reading comprehension (literal meaning, following instructions, explicit and implicit information, details, inference) in several formats (chunking, multiple choice, cloze). A number of other unspecified language skills tests were also administered. Over 600 year six children in Sydney, Australia, served as subjects. Their performance in reading comprehension was influenced by vocabulary proficiency. The author reports that reading tests of literal and implied meaning appeared to measure the same skills. Cloze, chunked reading, and multiple choice tests also seemed to measure much the same skills. Speed of reading influenced performance on speeded reading comprehension tests. Recommends that a full profile of a pupil's reading can be determined by five tests: 1) vocabulary; 2) simple comprehension (comprehension of sentence structures or following instructions); 3) comprehension of one-sentence questions or paraphrased statements; 4) a cloze, multiple-choice or chunking form requiring the understanding of material presented in passages test; and 5) a speed of reading test.

MEYER, BONNIE J. F.; BRANDT, DAVID M.; & BLUTH, GEORGE J. Use of top-level structure in text: key for reading comprehension of ninth-grade students. *Reading Research Quarterly*, 1980, *16*, 72–103.

Investigates the effects of following the organiztion of two prose passages, with and without signaling, on immediate and delayed recall of information. The subjects were 102 ninth-grade students classified as good, average, and poor comprehenders, based on the comprehension scale of the Stanford Achievement Test and ratings of reading and English teachers. Special attention was given to 26 students whose scores on the vocabulary scale of the test were considerably higher than on the comprehension scale. Two well-organized passages with top-level structures employed comparison and problem solution respectively. Two versions of each passage were prepared: with signaling in which the top-level structure was explicitly stated, and without signaling, in which it was not. A random sample of those stratified by comprehension level and sex was assigned each signal condition. Each student read one version of a passage and immediately wrote all he could recall in his own words. One week later each subject wrote all he could recall, then took a recognition test consisting of statements or inferences related to the topic rating them for inclusion or exclusion. A weighted recall score included both total recall and central idea. For both passages and all dependent measures, the free immediate recall supported the classification of the three groups of students. Besides, immediate recall for both passages was superior to delayed recall. Good comprehenders used the authors' structure while poor comprehenders used what was called "default strategy," which was enumeration of details, etc. Average comprehenders varied in their use of structure. Students who used the author's structure also recalled a greater number of ideas and significantly more message units than did others. No effects of signal recall was enhanced with a larger number of signals. Signaling enhanced immediate recall for the 26 students but had no effect on delayed recall.

SCHWARTZ, ROBERT M. Levels of processing: the strategic demands of reading comprehension. *Reading Research Quarterly*, 1980, *15*, 433–449.

Explores the effects on reading comprehension by forcing attention to different levels of analysis. Four treatment conditions were provided by the text: 1. Normal Reading; 2. Word Choice (a pair of words appears above or below a blank line); 3. Reverse Reading (target word in reverse letter order above blank line); and 4. Letter Match (target word appears above line and a set of random letters below, one of four of which appears in word and must be marked. Four different stories were read by 40 subjects from each of these levels: second and fifth grades, and college undergraduates. Comprehension was assessed by the number of functional unit segments recalled and the number of individual target words used in retelling the story. Reversed digit recall was used between readings and recall of stories. Significant differences in idea recall for college students were in this order: Normal Reading<Reversed Reading<Letter Match. The Word Choice scores fell between Normal and Reversed Readings but did not differ significantly from either. In grades 2 and 5, the only treatment effect was that the Letter Match task resulted in fewer idea recalls. The use of target words differed significantly for college students in this order: Word Choice = Reversed Reading>Normal Reading>Letter Match. At fifth grade, the Word Choice task exceeded Normal Reading. Both Word Choice and Reversed Reading exceeded Letter Match but Normal Reading did not. For grade 2 subjects none of the treatment conditions differed significantly from Normal Reading. However, scores on Reversed Reading and Word Choice significantly exceeded the Letter Match Task.

MOSENTHAL, PETER; & NA, TONG JIN. Quality of children's recall under two classroom testing tasks: towards a socio-psycholinguistic model of reading comprehension. *Reading Research Quarterly*, 1980, *15*, 504–528.

Examines the effects of informal, low risk, reading comprehension compared to formal, high risk, comprehension of two tasks among good, average, and poor readers. Subjects were 114 fourth-graders from 12 reading groups in four classrooms. Grouping was based on scores on the *Stanford Reading Achievement Test* and teachers' opinions. Teacher-pupil discourse was tape-recorded once, each of ten weeks, for the entire reading lesson. The following week, a formal and an informal reading task were administered on different days. Pupils wrote as much as they could recall of each of three passages, then answered eight questions. The formality of the tasks was planned by the format of the materials and the directions the teachers gave pupils. Responses were scored by dividing protocols into three major categories called response register groups: 1. noncontingent responses (novel and old-information); 2. imitative responses (repeat teacher's utterances); and 3. contingent responses (expansions and expiations). During the instruction, children's oral communication material was classified as referential, text-structured as pragmatic inference. Results from two canonical correlations compared five response register groups with three meaning types in both formal and informal situations and all results were significant, some positive and others negative. ANOVA's revealed that the Imitative group recalled significantly more propositions than the others. The two Contingent groups recalled more referential propositions than the two Noncontingent groups. The Contingent Response Register groups recalled more text-structured meaning than the other two groups. Pupils using noncontingent responses recalled more pragmatic inference meanings than the other two groups. Since both register group and reading ability interacted with testing condition, a model of comprehension was suggested.

HARBER, JEAN R. The importance of evaluating the syntactic complexity of instructional material. *Reading Horizons*, Summer 1981, *20*, 280–289.

Argues from research evidence that the syntactic complexity of reading materials must be taken into consideration when materials are assigned to pupils. Fifteen activities for introducing syntactic structures to pupils are listed.

WHITE, REGINE S., & KARL, HERB. Reading, writing and sentence combining: the track record. *Reading Improvement*, Fall 1980, *17*, 226–232.

Reviews research on the effects of sentence combining activities on reading comprehension and writing and reports that these studies find that sentence combining significantly facilitates writing, but the effects on reading comprehension are less dramatic.

EHRI, LINNEA C., & GALANIS, ATHENA H. Teaching children to comprehend propositions conjoined by "before" and "after." *Journal of Experimental Child Psychology*, October 1980, *30*, 308–324.

Conducts three experiments to evaluate a language-training procedure in which preschool children were given sentences evoking opposite interpretations of the same syntactic structure. The syntactic forms studied were sentences containing "before" or "after" in which the order of the event mentioned reverses the order of actual occurrence (e.g., "Before Joe leaps, he looks."). The purpose was to determine if preschoolers could be taught the actual order of sentences written in reverse order forms. In all three experiments subjects were native-speaking children, ranging in age from 37 to 63 months. Children were presented a series of exemplars expressing both logical and arbitrarily sequenced events and were required to interpret the two types in alternative order. In Experiments 1 and 2, the experimental groups did correctly identify a greater number of reverse-order sentences on the posttest. Experiment 3 was conducted to determine if these results were due simply to practice. They were not. The authors conclude that precomprehension-level children do employ specific interpretational strategies consistently, and that training procedures can be used to teach underlying syntactic structures of a certain type.

IRWIN, JUDITH WESTPHAL. Fifth grade readers' comprehension of explicit and implicit connective propositions. *Journal of Reading Behavior*, Fall 1979, *11*, 261–271.

Utilizes 64 fifth graders of average reading ability in two studies of the influence of text doctored explicit and implicit use of the connectives "because" and "after" in the reading of three 60 word intermediate-level history text passages. Subjects read silently and recalled passage content orally. After an intervening period of general discussion, subjects were asked forced choice questions. Analysis of variance on forced choice scores revealed no significant effects for the treatment, the passages, or their interaction. The evidence suggested a greater power among these readers in comprehending reversible time sequences compared to reversible causal relationships.

SINGER, MURRAY. The role of case-filling inferences in the coherence of brief passages. *Discourse Processes*, July/September 1980, *3*, 185–201.

Designs three experiments to determine whether case-filling inferences which function so as to relate the propositions underlying a message are drawn in the course of decoding. The study focused upon the implications of verbs and verb phrases concerning the concepts that fill the related agent, patient, and instrument cases. In all three experiments, judgments about the "necessary" inferences were compared with those about directly expressed ideas and about inferences that were possible but not crucial for coherence. College students (42, 36, and 52, respectively) served as subjects. In Experiment 1, subjects listened to passages which stated the critical propositions explicitly, or permitted forward or backward inferences about the propositions. They were then asked whether or not they recognized sentences expressing the propositions. Results for all studies, but in the second and third experiments in particular, showed that scores for directly expressed ideas and the necessary inferences were similar, but scores were different for unnecessary inferences.

FISCHLER, IRA, & BLOOM, PAUL A. Rapid processing of the meaning of sentences. *Memory & Cognition*, May 1980, *8*, 216–225.

Examines the effects of sentence context presented one word at a time on recognition of the final word in the sentence when words of the sentence are presented at varying rates. The 240 introductory psychology students read 96 six-to-eight word sentences with the final word of the sentence missing. In the context condition, there were three possible corresponding final words: primary response words, words somewhat to very likely to be provided by context alone (as determined by cloze tests with 100 other subjects); unlikely words, words that syntactically and semantically complete the sentence but are unlikely to be given; and anomalous words. In the control condition, the sentence contexts and test words were reordered so that no test words made sense in the context of the sentence. In addition to the real test words, subjects in both the context and control condition were also presented non-word test words. These were constructed by changing the first letter of the three types of test words to make a nonsense word. Test sentences and test words were presented on a video terminal one word at a time at four rates: 4, 12, 20, and 28 words per second. The dependent variable was latency in determining if the final word was a real or non-real word. Context only minimally facilitated the recognition rate of primary response or likely words at slower rates of presentation, but the inhibitory effects of anomalous words were apparent at all four presentation rates. The authors concluded that sentence contexts lost their effectiveness at the highest presentation rates, but the high rates at which the sentence contexts still affect recognition meant that semantic information occurs very early in sentence processing.

WEBBER, BONNIE LYNN. Syntax beyond the sentence: anaphora. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension.* Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 141–164.

Reviews research from diverse areas on the subject of anaphora. Research is discussed from: philosophy, memory organization, language acquisition, syntactic constraints, sentence generation/interpretation, and control of inferential processing.

IRWIN, JUDITH W. The effects of explicitness and clause order on the comprehension of reversible causal relationships. *Reading Research Quarterly*, 1980, *15*, 477–487.

Examines the effects of clause order and explicitness of fifth-graders' and college-level students' understanding of reversible causal relationships. Four versions of eight fifth-grade social studies text passages, each containing two reversible causal relationships, were used to analyze the comprehension performance of 120 fifth graders and 60 college students on a post-passage forced-choice test. The level of comprehension for all fifth grade experimental groups was quite low, particularly for implicit-condition performance, and differences in explicitness and clause order were not significant for the fifth grader responses. Analysis of variance for the college subjects revealed significant effects in favor of normal clause order and for explicitly stated cause-effect relationships ($p < .01$).

CAREY, ROBERT F.; HARSTE, JEROME C.; & SMITH, SHARON L. Contextual constraints and discourse processes: a replication study. *Reading Research Quarterly*, 1981, *16*, 201–212.

Modifies an earlier study to determine the possible effects of immediate contextual (situational) constraints on findings of the original study. Describes both the original study and the differences necessitated by the conditions of the present investigation. Subjects consisted of 142 college students drawn from varied subgroups.

Findings extend those of the earlier study by adding the significance of "context-of-situation" to background of information as constraints upon the meanings constructed during an encounter with printed text.

BRUCE, BERTRAM C. Plans and social actions. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 367–384.

Examines the components of a model for the understanding of plans and social actions. The model is first applied to narrative text, wherein actions of characters need to be interpreted as social actions. The emphasis on social actions and plans leads to a distinction between story analysis and story model analysis (i.e., analysis of a reader's model for the story). Next, the model is applied to texts in general, wherein the author's action of writing needs to be interpreted as an action done to achieve a social goal. Implications for teaching and further research are discussed also.

SPIRO, RAND J. Constructive processes in prose comprehension and recall. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 245–278.

Presents an elementary and general introduction to the constructive orientation to prose understanding. Gives its historical context, discusses some of the unresolved issues of prose understanding, and suggests future research directions.

RUBIN, ANDEE. A theoretical taxonomy of the differences between oral and written language. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 411–438.

Explores the differences among various forms of oral and written language. The discussion is based on the claim that it is misleading to compare the broad class "oral language" with all "written language," because differences within these classes can be much greater than any general distinction between them. The chapter introduces a taxonomy of the differences between children's typical oral language experiences and the experience of reading a book. The taxonomy explores these distinctions and then considers some implications for reading instruction and doing research in reading comprehension. Another section discusses some experimental work related to a child's transition from listening to reading comprehension. The final section explores the difficulties that deictic words, whose meanings are sensitive to the time, place, and context of the utterance, may present to children when these terms are used in written text.

TIRRE, WILLIAM C.; MANELIS, LEON; & LEICHT, KENNETH L. The effects of imaginal and verbal strategies on prose comprehension by adults. *Journal of Reading Behavior*, Summer 1979, *11*, 99–106.

Tests the effects of strategy type (imaginal vs. verbal) and concreteness (concrete vs. abstract passage content) upon the comprehension of 80 undergraduate university subjects. Two pairs of passages of approximately 1400 words in length and of varied concreteness but similar in comprehensibility ratings were used. Subjects processed verbally or imaginally in sentences expressing relationships a list of passage related words. Two tests were given over each passage, a multiple choice and a production test. Verbal strategy proved significantly better than imaginal ($p < .05$). A strong but nonsignificant trend favored verbal strategy in the reproduction test. The effect in favor of concreteness of passage content was clearly significant ($p < .001$).

WALKER, CAROL H., & MEYER, BONNIE J. F. Integrating different types of information in text. *Journal of Verbal Learning and Verbal Behavior*, June 1980, *19*, 263–275.

Manipulates three sets of variables—two types of instruction ("read once" vs. "learn completely"), two mode presentations (separate vs. consecutive premises), and high vs. low integration of information in content structure—to assess the accuracy of verification, decision time, and free recall responses for 32 university undergraduates who read and respond to two sets of passages. Subjects were oriented to their task through instruction and practice, and were tested individually. Significant main effects were found for the three conditions: superiority was noted for the "learn" group (p .0001), consecutive presentations (p .01), and information high in content structure (p .0001). Information high in the structure was more likely to be integrated than information low in the structure. Premises that occurred together in the text promoted faster correct decisions than premises occurring separately.

STEVENS, KATHLEEEN C. The effect of background knowledge on the reading comprehension of ninth graders. *Journal of Reading Behavior*, Summer 1980, *12*, 151–154.

Investigates the extent to which background knowledge (schemata) influences the reading comprehension performance of a total ninth grade (109 subjects) whose scores on the *SRA High School Placement Test* (1971) ranged from 4.4 to 12.5 grade equivalents. Background knowledge was assessed by four multiple-choice items over each of 25 topics on which reading passages were available. Comprehension materials were drawn from the McCall-Crabbs *Standard Test Lessons in Reading* (1961). The *Nelson Denny Reading Test* (1962) was used to group students into high, medium, and low ability groups. Control for passage effects was achieved by assigning equal numbers of subjects with high and low background scores to reading the particular passages. Results indicated that background knowledge was a significant factor for all ability groups ($p < .01$).

WILSON, MOLLY M. The processing strategies of average and below average readers answering factual and inferential questions on three equivalent passages. *Journal of Reading Behavior*, Fall 1979, *11*, 235–245.

Investigates the comprehension performance of 36 sixth and seventh grade subjects divided into average or below average readers on the basis of a *California Achievement Test* score above or below reading equivalence of 7.0. Subjects read three stories from *SRA Better Reading Booklet 1* assessed at a fifth grade Dale-Chall level. Comprehension was individually assessed with eight short answer questions (four factual and four inferential) over each passage. Each subject read one passage for each of the question positives: prequestions, interspersed questions, and post questions. Inferential questions were better predictors of performance across ability groups ($p < .001$). Average readers performed better than below average on both inferential and factual questions. For question placement effects, factual questions produced a notably higher predictor effect than inferential questions ($p < .005$). For factual questions, interspersed questions were more effective than pre or past questions.

ROSENSHINE, BARAK V. Skill hierarchies in reading comprehension. In Rand J. Spiro, Bertram C. Bruce, William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 535–554.

Explores two issues: whether there are distinct reading comprehension skills and whether there is evidence of a skill hierarchy. Experimental studies were not found

on these issues and, thus, the review is an exploration of data from four sources: 1) authoritative lists of comprehension skills; 2) factor analytic studies on the interrelatedness of reading skills; 3) textbooks for teachers of elementary reading; and 4) reading series and instructional materials developed for primary grade children. No clear evidence was found for distinct reading skills or for a skill hierarchy.

IRWIN, JUDITH, & WITTE, PAULINE L. College readers' mental imagery, comprehension and attitude with abstract and concrete expository materials. *Reading World*, October 1980, *20*, 35–43.

Investigates the relationship between the number and clarity of mental images reported and reported interest, perceived reading ease, and comprehension scores. Using passages from the *Davis Reading Test* rated on a five-point scale of abstractness; four forms of an instrument were administered to 102 college students taking a reading methods course. Each form consisted of (1) a page of directions but not explaining the purpose of the study; (2) one of four experimental passages; (3) Likert scale ratings of reading ease of, reading interest in, and attitude toward the passages, and (4) five multiple-choice comprehension questions. A second investigation essentially replicated these conditions with the exception that readability was more carefully controlled and comprehension consisted of nine short answer questions. Subjects were placed in two abstract passage conditions or two concrete passage conditions. Neither of the two investigations produced significant differences between concrete-abstract passage conditions and reading ease, attitude, or comprehension scale. The first investigation produced significant differences ($p < .001$) for number and clarity of images in favor of the concrete passages. Investigators suggest readability control may have negated this effect in the second study.

ROYER, JAMES M.; HASTINGS, C. NICHOLAS; & HOOK, COLIN. A sentence verification technique for measuring reading comprehension. *Journal of Reading Behavior*, Winter 1979, *11*, 355–363.

Reports on two studies in which 54 fifth-sixth graders and 20 fourth graders and 22 sixth graders were asked to perform a sentence verification task on reading passages at three relative reading levels: at level, two grades below, and two grades above. The purpose was to determine if the sentence verification technique was a viable measure of reading comprehension. Subjects were asked to respond to four sentence stimuli: original, paraphrased, meaning change, and distractor sentences. Resulting 'proportion correct' scores and 'd parameter' scores are analyzed and presented. Analysis of variance indicated that the passage difficulty level, subject grade level and their interaction were significant sources of variance. Sentence type also was a reliable source of variance ($p < .01$). Correlations of the sentence verification results with the *ITED* and the *SAT* scores for these students are presented.

IV-11 Oral reading

WINSOR, ROBERT D. Oral reading: then and now. *Alabama Reader*, May 1981, *8*(2), 49–56.

Presents a brief history of oral reading and discusses the uses of oral reading over the last 2000 years, some changes in approaches to oral reading in the 1920s and 1930s, and ways to prepare children for oral reading.

DONALD, D. R. Analysis of children's oral reading errors: a current perspective. *Journal of Research in Reading*, September 1980, *3*, 106–115.

Discusses the reasons for the current interest in oral reading errors with a particular emphasis in the recent theoretical shifts in the process of learning to read. In

addition, the author notes the change from a descriptive analysis of errors to a linguistic analysis, and the developmental changes in reading errors of pupils learning to read.

GOODMAN, KENNETH S., & GOLLASCH, FREDERICK V. Word omissions: deliberate and non-deliberate. *Reading Research Quarterly*, 1980, *16*, 6–13.

Studies the role of omissions of words in oral reading and postulates that there are two types of omissions: deliberate and non-deliberate. First the authors present and discuss the omission patterns of one reader, then summarize four key points about her omissions: 1) omissions can be deliberate; 2) deliberate omissions are reported as involving the reader's choosing, after consideration, to omit a word rather than to substitute a non-word, a real word, or to obtain aid; 3) readers know when they make omissions; 4) reading involves taking risks and readers may deliberately omit a word expecting that later context will clarify the meaning. Data from the one subject and other subjects' oral reading are used to support the authors' conclusions that there are deliberate and non-deliberate omissions. These conclusions are then related to psycholinguistic theory. The phenomenon of omission is then compared to a related one, substitutions of non-words for real words. The authors also present a categorization of the types and causes (a taxonomy) of non-deliberate conclusions. They postulate six types of non-deliberate omissions: 1) omissions incidental to a complex miscue on a phrase or clause level, 2) omissions of optional surface structure elements, 3) omissions of unpredictable elements, 4) omissions involving dialogue, 5) omissions of words in compounds, and 6) omissions involved in the prediction of other structures. It was concluded that omissions are not simply the result of encountering a hard word or carelessness, but are in reality surface representations of an underlying interaction between the reader and the text.

CAMBOURNE, BRIAN, & ROUSCH, PETER. There's more to reading than meets the eye. . . . *Australian Journal of Reading*, June 1980, *3*, 107–114.

Discusses the use of grammatical and graphophonic cues of good and poor readers and briefly presents the findings of a two-year study conducted in Australia. The researchers identified, from nearly 900 normal children in grades 2, 4, 6, and 8, the top 5%, middle 5%, and bottom 5% of readers for a final total of 120. Each child read a story aloud and the 12,000 errors made were analyzed, each from about 20 different perspectives. Not only did all readers make errors, but they were made at approximately the same rate. No effort was made to correct 70% of errors on the part of all readers. Of the 30% of errors corrected, good readers were more than half again as successful in their corrections as the poorest readers. For good readers, a high proportion of uncorrected errors did not detract from the overall meaning of the text. Low ability readers made many more errors resulting in meaningless text than did good readers.

CAMBOURNE, BRIAN, & ROUSCH, PETER. "How do Australian children read? The Riverina Research Studies." *Reading-Education*, Autumn, 1980, *5*, 5–17.

Summarizes briefly the results of a study (The Riverina Studies) of oral reading errors of 120 Australian pupils and discusses the implications of only those results of immediate interest to teachers. From 900 "normal" pupils in grades two, four, six, and eight, the researchers selected (by unspecified means) the top 10, middle 10 and lowest 10 readers at each grade level. The passages subjects read orally were not specified, but the author reports that the passages read put each reader "under the same degree of reading strain." More than 12,000 reading errors were analyzed in an unspecified manner. Among the findings reported and discussed were: all three levels of readers reading material suited for their reading ability made equal numbers of errors; all three groups corrected only 30% of their errors, but the errors not corrected by good and average readers were largely semantically acceptable, whereas the errors

of poor readers were largely semantically unacceptable; though most errors for the three groups were syntactically acceptable, poor readers made fewer syntactically acceptable errors than good and average readers; the errors of poor readers were generally more graphophonically similar to the word that should have been read than the errors of good and average readers.

BIEMILLER, ANDREW. Changes in the use of graphic and contextual information as functions of passage difficulty and reading achievement level. *Journal of Reading Behavior*, Winter 1979, *11*, 307–318.

Compares the reading strategies of good and poor readers by analyzing their oral reading miscues. Subjects were 81 first graders, 34 of whom attended one school and participated in an experimental instructional program; the other 47 came from the other first grade classrooms (regular classes). The reading materials were four 66- to 96-word passages. The oral reading passages were made up of varying percentages of words from the preprimer used in the classroom: 100%, 80%, 50%, and 34%. Assistance was given if a child asked for it or if a child paused on a word longer than five seconds. In keeping with the author's view that the need for assistance reflects an attempt to use graphic cues, but an inability to do so successfully, such assistance was classified as a reader's use of graphic cues. All children started with the easiest passage (100% preprimer words) and continued until making errors on 25% or more of the words. Achievement groups were formed on the basis of the most advanced passage a pupil could read. Variations in use of graphic information were examined with two measures: percentage of non-response errors among all errors, and percentage of graphic substitutions among all response errors. With increasing passage difficulty, all children made proportionally more non-response and graphic substitutions errors. On any given passage, the most able readers made the lowest or nearly lowest percentage of non-response errors. However, when groups were compared by using the most difficult passage each could read without making more than 25% errors, the least able group made proportionately fewer non-response errors. On the most difficult passages they could read, the most able readers made higher proportions of graphic errors than did other children. The author concluded that, when confronted with increasingly difficult material (for their respective reading levels), both good and poor readers increase their use of graphic information strategies, and that able readers do not make less use of graphic cues than poor readers.

WHALEY, JILL FITZGERALD, & KIBBY, MICHAEL W. The relative importance of reliance on intraword characteristics and interword constraints for beginning reading achievement. *Journal of Educational Research*, May/June 1981, *74*, 315–320.

Investigates the relative importance of use of intraword characteristics and interword relations for beginning reading achievement. Subjects of the experiment were 98 first graders randomly selected from three schools, two rural and one urban. Use of intraword and interword dependencies was assessed by applying *Reading Miscue Inventory* procedures to children's oral reading of the *Gray Oral Reading Test*. The passage analyzed was usually the passage prior to the passage where the reading broke down. Three indices were formulated from the oral reading analysis: Graphic Similarity (GI), Sound Similarity (SI) and Grammatical Relationships (GRI). GI and SI were the measures of strength of reliance on intraword characteristics and GRI was the measure of reliance on interword relations. The dependent variables were vocabulary and comprehension raw scores on the *Gates MacGinitie Reading Achievement Test*. IQ was assessed with the *Peabody Picture Vocabulary Test*. In a stepwise multivariate multiple regression analysis, with IQ as a control variable, intraword

analysis (graphic similarity and sound similarity) significantly predicted reading ability above and beyond IQ and interword analysis. The results support the contention that dependence on within-word characteristics is more important for beginning reading success than is reliance on between-word analysis. The findings are related to two contrasting theories of reading instruction.

GRAHAM, STEVE. Word recognition skills of learning disabled children and average students. *Reading Psychology*, November 1980, *2*, 23-33.

Investigates the ability of learnig disabled and average pupils to recognize and identify words. Two informal reading measures, the *Sunbye Minimal Contrast Phonics Test* and an oral reading sample, were administered to three groups: 1) learning disabled children evidencing reading problems (LD), 2) average pupils matched with the learning disabled group on reading level and IQ (YN), and 3) average pupils matched with the learning disabled group on chronological age and IQ (ON). The average WISC-R IQ of the 15 LD children was 97 and their average reading comprehension score on the *Stanford Diagnostic Reading Test* was 3.25. Their average age was 11-2 and they were in grades 4, 5, and 6. Average IQ (*Cognitive Abilities Test*) for the 15 YN children was 100 and their average reading score was 3.28. Their average age was 9-0 and they were all third graders. The ON group, all fifth graders, with an average age of 11-0, had an average IQ of 103 and their reading was assumed to be average. Oral reading samples were analyzed using a miscue analysis schema. The LD group and average readers did not differ on identification of symbol-sound associations, word recognition proficiency, the ability to detect and correct word recognition errors, and the ability to use information within the test to recognize words. The LD and ON group did differ on mean number of word recognition errors.

PFLAUM, SUZANNE W., & BRYAN, TANIS H. Oral reading behaviors in the learning disabled. *The Journal of Educational Research*, May/June 1980, *73*, 252-257.

Examines oral reading miscues of a group of learning disabled (LD) and a group of normal elementary school children to determine if they differed in the extent to which their meaning-change errors showed lack of use of context clues, the extent and kind of self-correction used, and the extent of phonic cues used. Social class influences upon oral reading errors were also examined. Participants were 36 LD children and 43 Non-LD children of the same sex and age. The average age was approximately 10.5 years. There were 14 suburban LD and 14 suburban non-LD children, and their respective reading grade scores were 5.0 and 6.1 (the difference between these scores was not significant); there were 22 inner-city LD students and 29 inner-city non-LD students. Their respective reading grade scores were 2.5 and 4.8. Reading was assessed with the *Iowa Test of Basic Skills* or the *California Test of Basic Skills*. In order to have each reader read the same content at approximately the same error rate, the test materials consisted of one approximately 340 word story rewritten into eight readability levels (grade one through grade nine ten). To assign reading passages at the desired error rate of 5% to 10%, pupils first read lists of words selected from the various versions of the story and then read two short beginning segments of the story. Oral reading performance was assessed on the oral reading of the last 300 words of the selected version. Despite the efforts to control for reading level, LD pupils made significantly more reading errors and miscues. The LD group had a greater proportion of meaning change errors and made proportionally fewer corrections of meaning change errors. There was no significant difference between LD and non-LD groups in the proportion of errors in which phonic cues were used. There were minimal differences in oral reading miscue strategies between middle and lower SES children.

NEGIN, GARY A., & RIOS, JUDITH L. Read it with meaning: aloud. *Reading Horizons*, Fall 1980, *21*, 7–11.

Explores the effects of oral and silent reading on the comprehension of 40 tenth grade students who met criteria of 100 or below on *Henman Nelson IQ Test* and twenty-fifth percentile or below on the Reading subtest of Form R of the *Scholastic Testing Service Developmental Series*. After completing a pilot study, subjects were randomly formed into two groups of 20. Each subject read two passages, an "independent level" passage of fifth grade difficulty and an "instructional level" passage of eighth grade difficulty. Comprehension questions were asked after each reading. The first group read the passages orally; the second group read the same passages silently. Significant comprehension differences were found in favor of the oral reading group on both levels of materials ($p < .01$).

KENDALL, JANET ROSS, & HOOD, JOYCE. Investigating the relationship between comprehension and word recognition: oral reading analysis of children with comprehension or word recognition disabilities. *Journal of Reading Behavior*, Spring 1979, *11*, 41–48.

Examines the oral reading errors of two types of disabled readers: pupils with adequate comprehension but poor word recognition (HiC-LoWR) and pupils with poor comprehension but adequate word recognition (LoC-HiWR). Subjects were 12 HiC-LoWRs and 13 LoC-HiWRs selected from 160 fifth graders who attended schools that qualified for Title I assistance in reading. Children were selected on the basis of performance on the *Iowa Test of Basic Skills* (comprehension), and the *Standard Reading Inventory* (word recognition), the *Lorge-Thorndike Intelligence Test* (LT) and the *Peabody Picture Vocabulary Test* (PPVT). LoC-HiWR subjects were those whose comprehension scores were in the lowest 25% (grade level scores 1.5 to 3.0) and whose word recognition scores were in the highest 75% (grade score third grade, second semester). Their average IQs were 91 on the LT and 90 on the PPVT. HiC-LoWR children had comprehension scores in the highest 75% (grade 3.1 to 4.7) and word recognition scores in the lowest 25% of the total sample (grade score, first grade, second semester). Their average IQs were 89 on the LT and 97 on the PPVT. Each child read orally two passages, a 233 word high third grade passage and a 283 word grade five passage. Quantitative data (number of errors, comprehension, rate of reading) were statistically analyzed, qualitative data (error classifications) were not, but rather, were inspected. Analyses indicated that, contrary to expectations, HiC-LoWR children used contextual information less well and corrected fewer errors. When pupils' oral reading of stories of comparable difficulty was contrasted, the HiC-LoWR group, as expected, used contextual information to better advantage.

NICHOLSON, TOM; PEARSON, P. DAVID; & DYKSTRA, ROBERT. Effects of embedded anomalies and oral reading errors on children's understanding of stories. *Journal of Reading Behavior*, Winter 1979, *11*, 339–354.

Creates an experimental situation of word identification errors by embedding anomalous words in passages so that readers are then forced to use the story context to make sense of the simulated misidentifications. In Experiment 1, the major study of the three experiments reported, 41 boys and 39 girls, all about 9 years of age and reading at or above grade level, served as subjects. Pupils each read and answered questions about 6 of 12 100-word stories. Stories were transformed by embedding six types of simulated errors: CORR, the target word; SRVU, semantically related, but visually dissimilar; SUVR, semantically unrelated, visually similar; SUVU, semantically visually unrelated (e.g., rabbit); NONE, a non-response and MIX, a mixture of SRUV, SUVR, SUVU and NONE. In addition to the simulated substitutions, there were four other independent variables: passage difficulty (half grade four, half grade

five six, rate of simulated substitution (6% or 15%), set strength (high set, repeating the target word only later), and text access (allowing pupils to look back at story when answering questions or no access). Dependent variables were tests of explicit (cloze items) and inferential (multiple choice items) comprehension. Two cloze (explicit) scores were counted: strict (the exact word deleted) and broad (a semantically appropriate substitution for the exact word). In Experiment 2, which had 10 nine-year-olds, similar materials and procedures were employed, except the stories had high, low, and no set. The purpose of Experiment 3 was to determine the extent to which the simulation results characterized actual reading behavior. Twenty 9–12 year-old disabled readers were utilized. In general it was found that: simulated errors were disruptive when accuracy (strict implicit comprehension) was required, only moderately disruptive when broad comprehension was required, and not disruptive at all when inferential comprehension was required; the effects of set were seen only in the more difficult passages; there was no difference between low and no set; and the performance of the poor readers tended to support the results of Experiment 1.

SMITH, CHRISTINE C. The relationship between oral reading miscues and comprehension: a study of developmental reading at the college level. In Gwyn Enright (Ed.) *Proceedings of the Thirteenth Annual Conference of the WCRA* (Western College Reading Association), 1980, *XIII*, 65–69.

Explores the relationship between oral reading miscues and comprehension for 27 university students, all of whom had volunteered for a reading evaluation at a university learning center. Sixteen students came from the general undergraduate population, maintained at least a 2.0 Grade Point Average and scored below the 50th percentile on a standardized reading test. Eleven students were preservice education students with a GPA of at least 2.5 and reding scores below the 50th percentile on the *Nelson-Denny Reading Test*. Each student read orally a seven-and-a-half page selection from *Fail Safe* and was asked to retell the story. The first 20 errors were analyzed with the *Reading Miscue Inventory*. At the word level, approximately 52% of the errors were both graphically and phonically similar to print. Sixty-four percent of the errors had the same grammatical function and 14% were grammatically unacceptable. Only 32% of word miscues were corrected. At the sentence analysis level, 91% of the sentences were syntactically correct or acceptable, 59% were semantically correct (given the previous context) and 40% were partially correct. The miscues did, however, change the author's meaning in 50% of the cases. Silent reading comprehension was assessed by the *McGraw-Hill Basic Skills System: Reading III*. Students recalled 56% of the material read on that test.

LESLIE, LAUREN. The use of graphic and contextual information by average and below-average readers. *Journal of Reading Behavior*, Summer 1980, *12*, 139–149.

Compares the use of graphic and contextual information during oral reading of average and below-average readers when they are equated on oral reading miscue rate. Forty second-grade average readers and 40 third-through sixth-grade below average readers served as subjects. On unspecified achievement tests, the scores ranged for average readers from 2.3 to 3.8 and for the below-average readers from 1.5 to 3.5. All pupils were administered the McCracken *Standard Reading Inventory*. The median instructional level for average readers was 2-2, for the below-average readers it was 3-1. All children read two passages orally: one 2-1 level fictional narrative and one 2-2 level non-fictional historical selection. Oral reading protocols were analyzed using a miscue analysis method. Miscues per hundred words were used to categorize passages for average and below-average readers as appropriate for a child's independent, instructional, or frustrational level. Thus, contrasts could be made between average and

below-average readers making a similar number of miscues on a passage. The rate of miscues affected the readers' use of contextual clues; miscues that were not syntactically correct, and miscues that were syntactically correct but semantically incompatible with the passage context both increased as the miscue rate increased. Below-average readers made proportionally more miscues that altered the meaning. They also demonstrated greater dependence on graphic cues, although they were less successful in decoding words. Average readers made proportionally fewer miscues that did alter the passage's meaning. The author concludes that studies comparing miscues of good and poor readers should equate their miscue rates on the passages to be read. She also recommends that for effective use of context, pupils should be reading from materials in which their miscue rate is no greater than one-to-two words per hundred.

FURNISS, DAVID W., & GRAVES, MICHAEL F. Effects of stressing oral reading accuracy on comprehension. *Reading Psychology*, Fall 1980, *2*, 8–14.

Checks the hypothesis that emphasis on oral reading accuracy retards reading comprehension. Subjects were 30 third grade pupils reading a paragraph of seventh grade readability under directions either to pronounce words accurately while reading (high criterial accuracy) or to not worry about pronunciation accuracy but to read smoothly and naturally (low criterial group). Readings and retellings of passage were tape recorded. Reading comprehension (recall), time, hesitations, and mispronunciations were compared and analyzed. Results indicated $p < .05$ significance on comprehension and faster reading times ($p < .1$) in favor of the low criterial group.

COX, RUTH MATZ, & SHRIGLEY, ROBERT L. Comparing three methods of practicing reading to reduce errors in oral reading. *Reading Improvement*, Winter 1980, *17*, 306–310.

Tests the effect of three modes of reading practice—(1) unison oral, (2) silent, and (3) reading orally to partners—on the reduction of oral reading error scores of 80 second- and third-grade pupils after 30 five-minute treatment sessions. All modes of practice reduced errors from pre- to posttest administration of selected lower paragraphs of the *Gilmore Oral Reading Test* ($p < .0001$). Unison and silent reading reduced errors more notably than reading orally to partners. No significant differences were obtained for sex or grade level of reader but differences were obtained for reader ability ($p < .003$).

SPIEGEL, DIXIE LEE, & ROGERS, CAROL. Teacher responses to miscues during oral reading by second-grade students. *Journal of Educational Research*, September October 1980, *74*, 8–12.

Observes teacher responses to oral reading errors during regular classroom instruction. Sixteen grade two teachers in four schools volunteered to participate. Their teaching experience ranged from one to 46 years. Each teacher was observed during reading instruction until at least nine separate interactions (teacher-pupil dialogue about an error) were observed. No more than three interactions with a single child were tallied. Additionally, an attempt was made to collect data from each reading group. Examination of 181 responses resulted in a classification system of eight categories: tell, visual, visual context, sound, spell, meaning, structural analysis, and reference to prior use. In over 50% of the time, the teachers told the child the correct word. Almost 30% of the responses were perceptually oriented (visual, visual context, or spell). Only 5% of the responses involved using meaning cues. Meaning was used as a response by only five of the 16 teachers. Seven of the teachers showed little variation in the kinds of responses made, drawing from three or fewer categories.

PFLAUM, SUSANNA W.; PASCARELLA, ERNEST T.; BOSWICK, MARY, & AUER, CAROL. The influence of pupil behaviors and pupil status factors on teacher

behaviors during oral reading lessons. *Journal of Educational Research*, November/December 1980, *74*, 99–105.

Assesses whether teacher responses to oral reading errors during classroom reading instruction are influenced by pupils' achievement status, by specific pupil behaviors or by both. The reading lessons of 16 different classrooms in four inner city all black schools were videotaped. From each classroom, three children were initially identified: one at-risk child who was already classified Learning Disabled or was recommended by the previous year's teacher, one low-performing reader, and one high-performing reader. The latter two were identified by the teacher with the only specification being that they be the same gender as the at-risk child. The other children in each of the 21 different reading groups of these initially identified children also became subjects of the study. Children who made no errors during oral reading were not included in the analysis, thus the sample for analysis was 31 children with known status levels (11 at-risk, 12 low-performing, eight high-performing) and 75 other children. Their average age was 8-0 and their reading achievement on the Chicago School Board's Continuous Progress Testing Program ranged from preprimer through second grade level. Pupils' oral reading errors were classified into one of seven categories, and teacher responses to the pupils' errors were categorized into one of nine classifications. Teacher behaviors were predicted more by pupil behavior than by pupil status level, suggesting that links in pupil-teacher interactions originate more in a pupil's actual behavior than in the teacher's preconceived notion of the pupil's proficiency. The specific cues provided by teachers to reading errors were not totally determined by actual pupil behavior, however. Teachers provided pupils they had identified as low-performers with more phonic cues and more prereading cues. Teachers also tended to assign longer readings to pupils they identified as better readers and higher achieving pupils.

CZIKO, GARY A. "Language Competence and Reading Strategies: A Comparison of First- and Second-Language Oral Reading Errors." *Language Learning*, June, 1980, *30*, 101–113.

Compares the French oral reading errors of three groups of seventh graders: one group of 22 English-speaking pupils with intermediate competence in French as a foreign language, one group of 25 English-speaking pupils with advanced competence in French, and one group of 29 native French-speaking pupils. The intermediate and advanced seventh graders attended the same school in a Montreal suburb, and the native speakers attended a school within the city of Montreal. All groups read aloud two short French narrative passages (184 and 287 words). Both were judged moderate to difficult for native speaking seventh graders. Intermediate children made significantly fewer deletion and insertion errors than advanced and native speaking children. Intermediate pupils also made more graphically similar substitution errors than native speakers. They also made more errors that did not conform to the syntactic, semantic or discourse constraints of the passages. The author concluded that advanced and native speaking children utilized an interactive strategy of drawing on both contextual and graphic information, while intermediate pupils utilized very little contextual information and relied primarily on graphic information.

BRUINSMA, ROBERT. Should lip movements and subvocalization during silent reading be directly remediated? *The Reading Teacher*, December 1980, *34*, 293–295.

Discusses the research literature on subvocalization during silent reading. Several cautions relative to attempts to reduce subvocalizing behavior are noted.

POTTER, FRANK. Miscue analysis: a cuationary note. *Journal of Research in Reading*, September 1980, *3*, 116–128.

Investigates a central proposition of miscue analysis—that a conceptually acceptable error indicates that a reader has made use of contextual information—by analyzing the reading of words in-and-out of context by 16 better and 12 poorer readers chosen from first-year students in a junior school. Materials consisted of the second and fourth passages of the *Neale Analysis of Reading Ability*. The counterbalanced design included reading the passage as context or as a randomly ordered listing of words. Readers made significantly fewer errors with context than without ($p < .01$). In general, errors of good and poor readers differed in their syntactic acceptability, but this occurred in-and-out of contextual setting. Readers of this sample made relatively little use of context for semantic acceptability.

WILKINSON, ALEX CHERRY; GUMINSKI, MARGARET; STANOVICH, KEITH E.; & WEST, RICHARD F. Variable interaction between visual recognition and memory in oral reading. *Journal of Experimental Psychology: Human Learning and Memory*, March 1981, *7*, 111–119.

Cites findings of three studies exploring the interaction between visual and memorial processes in oral reading. Subjects were all undergraduate students enrolled in introductory psychology courses. They were presented with text material in which meaningless numbers were inserted between meaningful words. The numbers were either in letters or in numerlas equal in length to the letter insertions (two or 222). In the first two experiments, oral reading took 75% longer and showed more errors when letter insertions rather than numerals were to be ignored. The third experiment showed that oral reading took 20% longer with inserted numerals and 100% longer with inserted letters than in text with no insertions. There was no effect of insertions on memory for phrasing or meaning. The authors use their findings to support a model of reading in which interaction between visual and memory processes is not obligatory and may vary in form or amount according to the demands of the task.

IV-12 Rate of reading

KOBASIGAWA, AKIRA; RANSOM, CHRISTINE C.; & HOLLAND, CORNELIUS J. Children's knowledge about skimming. *Alberta Journal of Educational Research*, September 1980, *26*, 169–182.

Compares and analyzes the reading-skimming behavior of 24 grade-four, 24 grade-six, and 14 grade-eight Canadian pupils when directed to read paragraph passages to find targeted information. Reading speed under typical reading directions served as a data comparison base. Understanding of the skimming function was assessed in interviews. Significant differences in time spent reading under the several reading directions were obtained by grade level ($p < .001$) and by reading condition (whole story, main idea-structure of paragraph, key word targeting, and directed explicit location, $p < .001$). Analysis of results suggested that most fourth and sixth grade subjects have the underlying skills to perform skimming strategies under explicit directions, but unlike the eighth grade subjects, did not make effective use of skimming as an implicit or enabling task solving behavior.

DEE-LUCAS, DIANA. Reading speed and memory for prose. *Journal of Reading Behavior*, Fall 1979, *11*, 221–233.

Employs 40 undergraduate psychology students divided into two fee payment schedule groups; one payment rate emphasizing comprehension per rate and one emphasizing comprehension retention. Subjects read three passages of 415 words and were asked 8 questions designed to test a range in meaning. Payoff conditions effectively influenced subjects' reading speeds in expected direction ($p < .001$). The faster group recalled significantly fewer propositions than the retention oriented group ($p < .001$). The correlation coefficient between the two groups on type of propositions recalled was .85. Specific recall patterns are discussed.

IV-13 Other factors related to reading

STEVENS, KATHLEEN C. The effect of interest on the reading comprehension of gifted readers. *Reading Horizons*, Fall 1980, *21*, 12–15.

Notes the effect of interest on the reading comprehension of pupils with superior reading ability and superior intelligence. Subjects were 93 fifth and sixth grade pupils, of whom 31 were identified as superior. The superior group scored above the 83rd percentile on the SRA *Assessment Survey* and had average scores of 123 on the *Otis-Lennon Mental Abilities Test*. The scores of the middle and low ability students were not reported. Interest was assessed on 25 topics by means of an interest inventory, and two high interest and two low interest topics were identified for each subject. Children then read four passages selected from the *McCall-Crabbs Standard Test Lessons in Reading*, Books D and E, two high interest and two low interest. The dependent variable was the grade level score accompanying the number of questions correct for each passage. High ability pupils scored higher than did others, but there was no siginficant main effect difference between the scores on high and low interest passages. There was a significant interaction between ability and interest, however. Further analysis indicated that high ability students scored higher on high interest passages than on low interest passages, but this was not the case for middle and low ability students.

SCHUMACKER, RANDALL E. Differences in comprehension are important in studies of conformity, influence, and persuasion. *Psychological Reports*, April 1981, *48*, 583–586.

Assesses the effects of different levels of comprehension on the persuasibility of undergraduate college students. A total of 170 students was administered the comprehension section of the *Nelson-Denny Reading Test*. Groups of 10 males and 10 females each were then established as high, medium, or low in comprehension based on their reading scores. These 60 students then read a persuasive communication and a five-item seven-point scale measure of persuasibility was presented. Subjects high in comprehension were persuaded the most; subjects low in comprehension, the least. No sex differences were noted.

MCDANIEL, NETTIE C. Enhancing reading attentiveness. *Alabama Reader*, May 1981, *8*(2), 7–12.

Assesses change differences in the reading attentiveness of two groups of black low achieving junior high school pupils exposed to two types of reading materials: reading traditional workbook stories followed by branched stories and reading traditional workbook stories twice. Branched stories are described as fictional stories with alternative choices in plot direction. Subjects consisted of 104 experimental and 76 control subjects who were observed twice using the Jackson-Hudgins Observation Schedule. Although both groups registered significantly higher scores in attentiveness on second assessment ($p < .001$), improvement was more notable for the branched story condition. Improvement in attentiveness results favored older pupils, girls, seventh graders rather than sixth or eighth graders, and lower reading levels rather than upper reading levels.

HARPER, C. B. J., & MAHAREY, MARGARET M. Attending behaviour in reading and socio-economic status. *Reading Psychology*, Fall 1980, *2*, 15–22.

Relates task maintained attention in 10- and 15-minute reading instructional situations to SES, age, sex, and reading performance as measured by the *New Zealand Progressive Achievement Tests* in Comprehension and Vocabulary. Subjexts consisted of 32 twelve- and thirteen-year-old and 32 six- and seven-year-old pupils and were chosen because they fit the criteria of "average" reading performance, sex, and high or low SES rating by father's occupation. Children were observed for 10- to 15-minute periods for attending behaviors. Younger subjects demonstrated significantly greater

($p < .01$) off-task episodes. Older subjects demonstrated fewer but longer off-task episodes. Total time spent attending increased with age. No significant difference between girl and boy attention maintenance was observed. Younger subjects from higher SES homes demonstrated significantly greater non-attendance to task. Results for older subjects of different SES were not conclusive.

SVANUM, SOREN, & BRINGLE, ROBERT G. Evaluation of confluence model variables on IQ and achievement test scores in a sample of 6- to 11-year-old children. *Journal of Educational Psychology*, August 1980, *72*, 427–436.

Tests the confluence model of cognitive development. The confluence model postulates that changes in family configuration reflected by number and age spacing of siblings affects the intellectual environment of the family and, consequently, the intellectual growth of members of the family. This argument maintains that the "intellectual environment" can be viewed as a funcation of the average of the absolute intellectual levels of its members, thus making an individual child's intellectual development a function of the intellectual levels of siblings and parents. Subjects of the study were 7,060 6-to-11 year old noninstitutionalized children who were part of the 1963–1965 Health Examination Survey of the National Center for Health Statistics. Each child in the study was administered the Vocabulary and Block Design subtests of the WISC and the Reading and Arithmetic subtests of the WRAT. With each successive increase in family size, there was a consistent decrease in both intellectual and educational development. For 6,265 children, SES was correlated −.29 with family size, thus SES was included in the stepwise multiple regression analyses. Although analyses of the relation of family size to both intellectual and academic development provided support for the confluence model, analyses of the relation of sibling order to the index of educational achievement revealed no significant overall relation of sibling order, which was independent of family size and SES. After covariation of family size and SES, a small and positive relationship was found between sibling order and intellectual development. Within each family size, sibling order showed no consistent or significant relation to measures of achievement or intelligene. Tests of the confluence model incorporating further refinements that detailed age-dependent relationships also failed to reveal any overall or consistent relation between sibling order and intellectual performance.

HARRISON, PATTI L. Mercer's adaptive behavior inventory, the McCarthy scales, and dental development as predictors of first-grade achievement. *Journal of Educational Psychology*, February 1981, *73*, 78–82.

Correlates performance of beginning first graders on the *McCarthy Scales of Children's Abilities*, a measure of dental development, and their parents' rating on the *Adaptive Behavior Inventory for Children* with performance at the end of first grade on the *Metropolitan Achievement Test* (MAT). The mean McCarthy General Cognitive Index was 91 and the mean McCarthy Motor Index was 50. Subjects included 17 black children and 48 white children. Teething level was measured by an 11-point scale, with scores ranging from 1 (no teeth loose, no permanent teeth erupted) to 11 (the eruption of a very large number of permanent teeth). The two McCarthy indexes, Cognitive and Motor, were significantly correlated with the MAT (.75 and .53 respectively). Adaptive behavior was also significantly correlated with MAT scores (.32), but dental development was not (−.09). The McCarthy General Cognitive Index emerged as the only significant predictor of achievement in multiple regression analyses. The author concludes that cognitive development at the beginning of first grade is a sufficient predictor of first-grade achievement, and that measures of dental and motor development and adaptive behavior do not provide a more accurate prediction.

BENSON, GERALD P., & WEIGEL, DANIEL J. Ninth grade adjustment and achievement as related to mobility. *Educational Research Quarterly*, Winter 1980-81, *5*(4), 15-19.

Examines the relationship between school mobility, recency of change, academic achievement, and classroom adjustment for 643 ninth-graders as reported by school records, by staff ratings on the *Classroom Behavior Inventory*, and by raw scores on the reading and mathematics sections of the *Stanford Achievement Test*. Information obtained from school records included the total number of schools attended during junior high school and the date of entrance for the school currently enrolled in. Correlation coefficients revealed that mobility and recency of mobility were significantly and negatively related to achievement in math ($r = -.12$ for mobility; rho $= -.14$ for recency), and to classroom adjustment ($r = -.33$; rho $= -.33$), but not to reading achievement. Students entering later in the junior high years were rated lower in adjustment and obtained lower scores in math achievement.

CHERNICK, ELEANOR. Effects of Feingold diet on reading achievement and classroom behavior. *The Reading Teacher*, November 1980, *34*, 171-174.

Examines the classroom behavior and reading achievement of 13 children, aged 6 to 12, with histories of medical difficulty who were placed for six months on the Feingold elimination diet. Six members of the diet group were matched with six controls on results obtained from the *Gates-MacGinitie Reading Tests* and the *Wide Range Achievement Test*, reading subtest, as well as on scores on the teacher completed *Connors Teacher Rating Scale*. Six months after adoption of the diet, reading achievement and classroom behavior were not significantly different. Mothers who adhered more rigorously to the diet claimed positive improvement in children's behavior and attitudes.

PELLEGRINI, A. D. The relationship between kindergarteners' play and achievement in prereading, language, and writing. *Psychology in the Schools*, October 1980, *17*, 530-535.

Correlates a rating of children's play, SES, sex, and measures of reading readiness (reading, language and writing). Participants were 65 rural kindergarten children of mixed SES. Each child was observed by two observers during five 20-minute free play periods. Each play episode was classified according to a cognitive hierarchy of play as functional, constructive, drama, or games-with-rules. A child's play rating was the type of play most frequently observed. Achievement was assessed two weeks before the play observations with the *Metropolitan Readiness Test*, Language and Reading subtests, and a non-standardized test of pupils' word writing fluency. The most common play category was drama, and games-with-rules were not observed. Play rating correlated with reading readiness .75, language .42, and word writing .50. Sex did not correlate significantly with any of the other measures, and SES correlated significantly (.36) only with word writing. In a stepwise multiple regression, neither sex nor SES significantly increased the predictive ability of play for language or reading. Both play and SES did contribute significantly to the prediction of writing.

QUISENBERRY, NANCY L. & KLASEK, CHARLES B. The relationship of the amount of time children spend viewing television to achievement at the intermediate grade level. *Illinois School Research and Development*, Spring 1981, *17*(3), 39-49.

Studies the relationship of time spent viewing television to academic achievement. Subjects were 106 fourth graders, 121 fifth graders, and 114 sixth graders. All

children were in regular classrooms. Television viewing during February was assessed by having children mark each morning all programs watched the previous evening or weekend using a diary format constructed from the *TV Guide* and the Sunday paper TV guide. Achievement was assessed with the *Iowa Test of Basic Skills* for fourth and fifth graders and the *Stanford Achievement Test* for sixth graders. All test scores were obtained in the fall. The composite score for each grade level was about average for that grade level. The average number of weekday hours of television viewing reported was approximately four at each grade level. The range in viewing was from .44 to 9.79 hours. There were no significant differences in TV viewing between sexes. There was an average of 13.7 hours of viewing on the weekend. On weeknights, 61% of the children terminated their viewing by 10:00 P.M., and an additional 33% ended at 11:00 P.M. On the weekend, 46% ended at 10:00 , 41% at 11:00, and 10% at midnight. The highest correlation coefficient reported between hours of TV viewing and the 14 achievement subtests was −.29 for the concepts subtest score at grade four. Except for fourth grade girls, there were more positive correlation coefficients than negative.

SLOBODA, JOHN. The psychology of music reading. *Psychology of Music*, 1978, *6*(2), 3–20.

Discusses various aspects of reading music. Topics covered include: the use of musical sense to adjust the timing and tonal quality of the notes, the process of learning to sight read music, misreading of musical notes, reading span of apprehension, memory of musical notes, and methods of helping learners, and improving musical text. The author cites the limited research available but notes the absence of substantial research into any of these matters.

JAY, TIMOTHY B. Comprehending dirty-word descriptions. *Language and Speech*, January–March 1981, *24*, 29–38.

Examines the effects of descriptions on people when those descriptions contain dirty-words. Two experiments were conducted. The first assessed the impressions from dirty and non-dirty-word descriptions when the order of the adjectives was varied along their semantic interpretation. The two-word adjective sets were constructed by pairing eight dirty words with each of eight non-dirty words, four positive and four negative. The effects of the order of the adjective was tested, working on the assumption that the adjective closest to the noun is most intrinsic to that noun. The adjectives were placed in sentences describing people and subjects were asked to rate on a scale of 1–6 their liking of the people. Subjects were given one of three sets of instructions: denotative, a lecture on the history of dirty-words; connotative, a list of all the adjectives with directions to think about the words; control, a list of the words with no instructions. There were 108 college freshmen in Experiment 1. Experiment 2 was the same as Experiment 1, except that the instruction variable was replaced by a speaker variable. The speaker (of the description) was identified as a friend or as an enemy. In Experiment 2 there were 144 freshmen. Liking was significantly influenced by a) semantic interpretation (connotation v. denotation), b) the intrinsicalness of the adjective to the person described (prenominal adjective order), and c) the contextual relation between the speaker and the listener (friend v. enemy).

LEWIS, CHRISTOPHER H., & GRIFFIN, MICHAEL J. Predicting the effects of vibration frequency and axis, and seating conditions on the reading of numeric displays. *Ergonomics*, May 1980, *23*, 485–501.

Notes the interaction of vibration with seating conditions and the wearing of such personal equipment as a flying helmet on reading performance. Ten paid male volunteers were required to read visual materials consisting of matrices of 50 numerals displayed on a television monitor which remained stationary. The reading task was performed under five levels of body vibration, each presented with two seating condi-

tions, hard flat seat with fixed footrest and a simulated helicopter seat with moving footrest. Each subject read one matrix of 50 numerals under each seating and vibration condition. Measures were made of the transmission of vibration from seat to head. In addition, the effect of wearing a flying helmet on the transmission of vibration to the head was determined. Seating conditions as well as the flying helmet interacted with the effects of vibration on reading performance. The wearing of the helmet resulted in increases in pitching motions of the head. With both seats, an effect of vibration level on reading accuracy was noted.

WILEMAN, STANLEY; KONVALINA, JOHN; & STEPHENS, LARRY J. Factors influencing success in beginning computer science courses. *The Journal of Educational Research*, March/April 1981, *74*, 223–226.

Correlates the final exam grades of 96 university students in three sections of an introductory computer science course with eight factors: 1) age; 2) high school performance; 3) number of hours worked per week; and scores on nonstandardized tests of 4) reading comprehension, 5) alphabetic and numeric sequences, 6) logical reasoning, 7) algorithmic execution and 8) alphanumeric translation. The reliability coefficient of the final exam was .70, and the internal reliability coefficients for the five tests ranged from .27 to .89. Correlation coefficients between the final exam grade and the eight factors ranged from −.11 (high school grades) through .00 (hours worked) to .35 (logical reasoning). Reading comprehension correlated .33. In a stepwise multiple regression, three variables significantly contributed to the prediction of the final score. In order of significance, they were: logical reasoning, alphabetic and numeric sequencing, and alphanumeric translations.

MAYER, RICHARD E. Elaboration techniques that increase the meaningfulness of technical text: an experimental test of the learning strategy hypothesis. *Journal of Educational Psychology*, December 1980, *72*, 770–784.

Compares the effects of three learning strategies and normal reading in a series of five related experiments. Strategies were advanced organizer, model elaboration, and comparative elaboration. All subjects read a ten page text on computer programming. Subjects for the experiments involved, respectively, 40 university subjects, 40 university subjects, 26 high school juniors, 80 university subjects, and 80 university subjects. Experiments 1 and 2 and 4 and 5 involved replications of experimental conditions. In the first two experiments, the advanced organizer and the model elaboration were significantly more effective in producing comprehension accuracy ($p < .01$). The third experiment, in which the experimental condition involved making comparisons about information in text, also produced greater significant understanding than control $p < .01$. The fourth and fifth experiments compared the conditions employed in the first three and introduced a math ability subject division based upon SAT-M scores. No significant difference occurred for treatment. High ability students performed significantly better than poor ($p < .001$), but high ability subjects did approximately as well under normal reading-learning conditions. Elaboration techniques produced greater advantage to application of information than in factual recall.

GRIMMETT, SADIE A., & MCCOY, MAE. Effects of parental communication on reading performance of third grade children. *The Reading Teacher*, December 1980, *34*, 303–308.

Researches the influence of differential approaches to school-parent communication about the third grade individualized reading program, reading achievement, and parental involvement. Eighty-four single child parents whose children attended a lower economic area school were assigned to one of four research cells: (D) receiving program description information only, (C) receiving personal communication facilitation forms only, (DC) receiving both program descriptions and facilitation forms, and (N) a

contrast group which received only form blanks. Results indicate that only DC and C parents made noticable efforts to communicate with school. The DC group, 19 of 21 parents and 50 communications, was significantly more communicative ($p < .05$) than the C group, 14 of 21 parents and 15 communications. Pre-post testing, using the *Gates-MacGinitie Reading Test*, Primary C, revealed significantly higher comprehension scores for the DC group ($p < .05$).

MATTHEWS, ROBERT C.; COON, ROBERT C.; & ROSENTHAL, GARY T. Broken text as a predictor of reading ability in the early grades. *Reading World*, October 1980, *20*, 57–64.

Describes the nature and results of pupil performance on paragraphs presented under four typographical spacing conditions: (1) original form, or 20 spaces between (2) words, (3) syllables, and (4) letters. Paragraphs were taken from the *Gray Oral Reading Test* and the *Durrell Analysis of Reading Difficulty*. Subjects were 125 grade one through six lab school pupils. Each subject read aloud the paragraphs graded at his level and was asked four comprehension questions pertinent to the paragraph. Total time and comprehension were recorded and correlated with *Stanford Achievement Test* scored obtained six months earlier. Detailed results are tabulated and discussed. In mean time, reading speed decreased as material was broken into smaller typographical units with the exception that first graders read the spaced word condition faster than regular print. Reading rate predictor power varied with Stanford subtest and grade level of subjects.

IV-14 Factors related to reading disability

GJESSING, HANS-JORGEN. Reading disability: diagnosis based on psychoeducational analysis of the learning function. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Fourth Yearbook*, 1980, 77–93.

Describes the author's view of reading disability or dyslexia. The author identifies and describes six different types of dyslexia: auditory dyslexia, visual dyslexia, auditory-visual dyslexia, emotional dyslexia, pedagogic dyslexia, and other. The author then discusses the usefulness of the system for diagnostic and remedial work and identifies research done in continental Europe, Great Britain, and the United States to support his subgroupings of dyslexia.

LEVINSON, HOWARD N. *A Solution to the Riddle Dyslexia*. New York: Springer-Verlag, 1980.

Reports the results of 15 years of investigation of 5,000 dyslexics. Numerous experiments and case studies are reported and discussed. The major premise of the book is that dyslexia, learning disorders and visual reading symptoms of dyslexia are due to cerebellar-vestibular (C-V) dysfunction. Reports that the so called "soft" and "minimal" balance, rhythm and direction signs characterizing dyslexia and minimal brain damage are actually specific, hard and fast localizing signs of C-V dysfunction. Also reports extensively on studies conducted with a 3D optical scanner which provided a measure of blurring speed. This technique is argued to be a rapid and accurate diagnosis of the C-V induced fixation and tracking dysfunction in dyslexia. Chapters of the book also present a historical discussion of dyslexia, speculations about the genetic and constitutional bases of dyslexia as well as the possible etiologic role of infectious, allergic, toxic and traumatic C-V factors occurring in early childhood. The author also critiques the typical reading clinic definition of reading disability as a gap between expected performance (based upon IQ) and actual reading achievement. The author also postulates that dyslexia is analogous to a form of motion sickness and demonstrates the therapeutic efficacy of anti-motion sickness medications in improving dyslexic symptomatology. Remedial educational methods are also presented.

NELSON, HAZEL E., & WARRINGTON, ELIZABETH K. An investigation of memory functions in dyslexic children. *The British Journal of Psychology*, November 1980, *71*, 487–503.

Investigates the functions of short term, long term, and semantic memory of 51 dyslexic and 28 control children. Dyslexic children were between 8 and 14 years of age and met a sliding scale of underachievement of one or more years. The controls were 6 months or less underachieving in reading and spelling and were matched with dyslexic group for sex, educational background, and age. Subjects were administered the *WISC*, *Schonell Graded Word Reading and Spelling* tests, the *English Picture Vocabulary* test, and six memory tests: (1) Digit Span, (2) Brown-Peterson paradigm, (3) Recognition of memory and faces, (4) Release from proactive interference, (5) Cross model learning and interference, and (6) Semantic memory functions of vocabulary level, new word learning, and rate of access. Major findings revealed significant impairment among dyslexics in capacity and temporal measure of short term memory, in modality-specific long term memory, and in acquisition of new information through semantic memory.

BOUMA, H., & LEGEIN, CH. P. Dyslexia: a specific recoding deficit? An analysis of response latencies for letters and words in dyslectics and in average readers. *Neuropsychologia*, 1980, *18*(3), 285–296.

Compares the foveal and parafoveal recognition of letters and words of 20 dyslexic and 20 normal readers. The dyslexic subjects, 18 boys and two girls, ranged in age from 11 to 15 years, and their reading scores on the Tanghe test were one-to-four years below normal. The normal readers, 11 boys and nine girls, were the same age and were reading at an average level for primary school pupils in the Netherlands. The stimuli were 23 letters and 48 common Dutch words. Stimuli were of three types: isolated single letters, single letters embedded between two letters, and three to five letter words. Stimuli were tachistoscopically presented at zero degrees (foveal) and one degree left or right (parafoveal). One degree equaled about four letters. Children responded by orally identifying the stimulus. Reaction tine (RT) and number correct were the dependent variables. The RTs of dyslexic children averaged about 100 msec. longer for letters and 200 msec. longer for words in both foveal and parafoveal presentation. The two groups did not differ in the number of correctly identified single letters, but dyslexics did make more errors on embedded letters and words.

WARRINGTON, ELIZABETH K., & SHALLICE, TIM. Word-form dyslexia. *Brain: A Journal of Neurology*, March 1980, *103*, 99–112.

Investigates two patients with an acquired reading and spelling dyslexia characterized by letter-by-letter reading. The patients were unable to read whole words. Both patients had left posterior cerebral lesions. The first patient, was a 52 year old headmaster of a comprehensive school when he suffered an intracranial hemmorhage. A left temporo-parietal intracranial hematoma was removed. He lost all reading facilities, and after five years his rate of reading was very slow, and he complained of being unable to see whole words. He had a WAIS IQ of approximately 122 and a PPVT IQ of 142 to 150. He demonstrated no perceptual deficits. Although he obtained a reading IQ of 121 on the Nelson reading test and read correctly 98/100 words on the Schonell graded word reading test, he appeared to spell most all words out and then reconstruct the word from the spelling. The second subject was a 35 year-old female, high school dropout. She had a very mild right hemiparesis and a homonymous upper right quadrantic defect. She had considerable difficulty in reading at intake. After partial removal of a glioma (astrocytoma grade III) her neurological status was essentially unchanged, except that her nominal dysphasia was more pronounced. She obtained a WAIS IQ of 77 ten days after surgery. Her PPVT IQ was 88. She was able to spell and write at a level commensurate with her educational achievements on the Schonell test. Reading comprehension was markedly impaired. Her reading IQ was 89, and she also read all words letter-by-letter. Both subjects were administered tests on

the following six abilities: angle of attention scan, selective attention, visual short-term memory reading speed and effect of word length, reading script, and tachistoscopic reading. The letter-by-letter reading of both subjects was not associated with deficiencies of visual or perceptual factors nor with impairment of visual span of apprehension. There was a clear association between reading speed and word length. Script and tachistoscopic presentation did not facilitate rapid word reading. The satisfactory performance of the patients on picture interpretation tasks (PPVT) was interpreted to suggest that the two components of the syndrome simultanagnosia are dissociable, and that this type of acquired dyslexia involves a damage to the system through which a visual word form is attained.

BRYANT, N. DALE, & GETTINGER, MARIBETH. Eliminating differences between learning disabled and nondisabled children on a paired-associate learning task. *The Journal of Educational Research*, May/June 1981, *74*, 342–346.

Compares 30 learning disabled (LD) and 30 nondisabled (ND) pupils on a paired-associative learning task which simulated the sight word learning process. The LD group averaged 10.5 years of age, had an average IQ of 105 (test used not reported), and an average reading score of 2.3 on the *Wide Range Achievement Test*. The ND group averaged 10.5 years of age and had been designated by their teachers as having average IQ and reading ability. The learning task required the paired-association of a geometric figure or figures as the stimulus and an auditorily presented, single syllable noun as the response. Sixteen paired-associate tasks were taught. Stimulus complexity was manipulated by showing single or multiple geometric objects as stimuli for word responses. Response competition was manipulated by excluding or including previously learned items in decks for four objects. Results indicate that while the LD group performed lower than the non-LD group, reducing stimulus complexity and response competition differentially facilitated learning by LD children more than non-LD children. The researchers concluded that instructional strategies that reduce overloading, such as reducing response competition and stimulus complexity, can substantially circumvent the effect of learning disabilities.

JOHNSON, DORIS J. Process deficits in learning disabled children and implications for reading. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *2*, 207–227.

Reviews research on certain process deficits in learning disabled children. After providing a theoretical frame of reference for evaluating learning disabled children, the author discusses deficits in attention, perception and memory. Implications for instruction are discussed.

ROSS, ALAN O. *Learning disability: the unrealized potential.* New York: McGraw-Hill, 1977.

Addresses questions of what a learning disability is, how it is tested and how learning disabled children are best helped. Topics covered include: description of learning disability; a history of the development of the concept; the role of the brain and intelligence in learning disabilities; overview of specific tests including the ITPA and the WISC-R; research related to selective attention in learning disabled children; behavioral approaches to teaching and handling the learning disabled child; and the emptional impact of a learning disability with a particular emphasis on children who refuse to attend school.

STRANGE, MICHAEL; ALLINGTON, RICHARD; & MILLER, VICKY. An investigation of the difference deficit hypothesis using the cloze procedure. *Reading Psychology*, Summer 1980, *1*, 165–168.

Utilizes the cloze procedure to examine the difference/deficit hypothesis about poor readers. Subjects were 50 poor readers selected from 194 seventh graders. All 50 subjects read at least at fourth grade level on an unspecified test. Half the poor readers were classified as difference readers; their reading vocabulary scores were at least one year below their reading comprehension scores. The other half of the subjects were classified as deficit readers, with no differences greater than one year in their vocabulary and comprehension scores. All subjects, including the original pool of 194 from which the 50 poor readers were selected, completed a cloze test on one 250-word fourth-grade narrative passage with every fifth word deleted. There was no siginficant difference in the average number of correct cloze items between the deficit and difference poor readers. Neither were there any significant differences between a group of 10 difference poor readers and 10 deficit poor readers who were matched on reading comprehension performance. The authors interpret these results as not supporting the difference/deficit hypothesis on the basis that difference readers do process material at least as well as deficit readers.

AARON, P. G. Research in reading disability: riddles and solutions. *Journal of Reading*, November 1980, *24*, 116–119.

Reviews opposing data concerning causes of reading disability, and summarizes some studies done at Indiana State University from which the author reaches three guides to future research. First, clinical subtypes should be isolated and studied separately. Second, deficits have been predominantly studied but strengths must also be included. Third, tests or experimental tasks are not "pure" so that batteries of tests are needed.

FISHER, DENNIS F. Dysfunctions in reading disability: there's more than meets the eye. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *1*, 109–135.

Describes the basic reading processes and possible loci of reading dysfunctions by combining and discussing two models of reading: Hochberg's and LaBerge and Samuels'. The pattern-analyzing functions that occur during the reading process are discussed also. From the research, the author proposes two sources of disability in dyslexia. The primary source is felt to be at some neurological input transformation location, probably Broca's area; the second is at the peripheral retinal processing level. Dyslexia and hyperlexia characterize the dysfunctions at these two locations. Instructional procedures appropriate to the treatment of reading dysfunctions are presented.

MANN, VIRGINIA A.; LIBERMAN, ISABELLE Y.; & SHANKWEILER, DONALD. Children's memory for sentences and word strings in relation to reading ability. *Memory & Cognition*, July 1980, *8*, 329–335.

Extends previous work on the effect of phonetic confusability to materials using phonetically controlled sentences and word strings. Subjects were 15 good and 15 poor second grade readers identified by means of teacher recommendations and scores on the word recognition subtest of the *Comprehensive Test of Basic Skills*. Reading skills were further assessed by means of the Word Attack and Word Identification subtests of the *Woodcock Reading Mastery Test*. Children listened to four permutations of seven 13-word English sentence forms: 1) a meaningful version in which none of the words rhyme; 2) a meaningful version in which the majority of words rhyme; 3) a meaningless version in which words do not rhyme; and 4) a meaningless version in which most words rhyme. In addition, children were given 14 five-item agrammatic word strings to listen to, seven containing words that rhymed and seven containing non-rhyming words. Both sentence and word string repetition tasks were done in one 20-minute session, with all children receiving the sentence task

first. For both sentences and word strings, error scores consisted of the sum of omissions, substitutions, and reversals. Good readers made fewer errors than poor readers when sentences or word strings contained no rhyming words; they did not excel poor readers when materials contained many rhyming words. The authors concluded that poor readers inferior recall of phonetically nonconfusable materials reflects failure to make full use of phonetic coding in working memory.

DALLAGO, MARIA LUCIA LOPES, & MOELY, BARBARA E. Free recall in boys of normal and poor reading levels as a function of task manipulations. *Journal of Experimental Child Psychology*, August 1980, *30*, 62–78.

Compares free recall of 45 reading disabled boys and 45 boys with no reading difficulties in three experimental conditions. All boys were in grades 4, 5, and 6 and were matched for age, grade, race, and socioeconomic background. The reading disabled boys had an average grade score on the WRAT-Reading of 1.6 and their average WISC-R IQ was 93. The nondisabled readers had an average stanine score of 4.7 on the *Comprehensive Tests of Basic Skills*. Stimuli were 50 line drawings of common objects belonging to 10 conceptual categories. Each drawing was on a separate card. The cards were covered with five different colored plastic sheets to produce othogonal conceptual and color categories (i.e., each of the five items of each set was covered by a different color). The three conditions were: semantic, formal, and free sort. Each child received two trials, and after each, his ability to name the cards shown was measured by free recall. During both trials, time was allowed for pupils to study the cards. During this time, their study and grouping procedures were observed. In all three conditions, boys were shown five sets for the first (base line) trial and five sets for the second trial. On the baseline trial of all conditions, subjects named each of the 25 objects as they were exposed, studied them for two minutes, and then recalled as many items as possible. On the second trial, the semantic group placed the cards into the five conceptual categories, the formal group placed them by color, and the free sort subjects grouped the cards into any five categories they wished. On the first trial, the disabled readers recalled significantly fewer items and demonstrated less study organization than nondisabled readers. Semantic recall scores were significantly higher than baseline recall scores and formal and free sort recall scores for all boys. Free sort recall was higher than baseline and formal recall for all subjects. There was no difference in baseline and formal conditions. There was no significant Reading Ability X Experimental Condition interaction effect on trial 2. On the observations of organization and study on trial 2, free sort condition poor readers did not organize as well as average readers. The authors conclude that poor readers are able to use clues for organizing study when they are provided to them, but that they have difficulty in spontaneously generating effective study techniques.

MARTINEZ, PATRICIA R.; GHATALA, ELIZABETH S.; & BELL, JOHN A. Size of processing unit during reading and retention of prose by good and poor readers. *Journal of Reading Behavior*, Summer 1980, *12*, 89–95.

Investigates the recall of story idea units presented at four levels and presented in one of three experimental semantic encoding conditions or a control reading condition. The encoding tasks involved responding to sentences, paragraphs, or words. Subjects were 160 seventh-grade pupils separated into good and poor reader groups by scores on the Reading Comprehension Test of the *Iowa Test of Basic Skills*. Good readers recalled a significantly larger number and higher level of idea units ($p < .001$). Findings regarding the influence of encoding conditions vs. normal reading were mixed. Word intervention was the poorest of all conditions. Sentence intervention proved to be the most effective of the three encoding conditions.

TRABASSO, TOM, & NICHOLAS, DAVID W. Memory and inferences in the comprehension of narratives. In Friedrich Wilkening, Johannes Becker, Tom Trabasso (Eds.) *Information Integration by Children*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Inc., 1980, 215–242.

Reviews the evidence on children's ability to construct representations of related sentences that reduce the original prose into integrated, meaning units. First, a selective review of studies which have dealt with inferential abilities of children is presented. The research reviewed includes both listening and reading. The authors conclude that young children can answer questions involving inferences and therefore can make them. The ability to answer inferential questions is constrained by limits of memory and semantic development and improves with age.

HEBBEN, N. A.; WHITMAN, R. D.; MILBERG, W. P.; ANDRESKO, M.; & GALPIN, R. Attentional dysfunction in poor readers. *Journal of Learning Disabilities*, May 1981, *14*, 287–290.

Compares the performance of 15 poor readers, 15 normal readers with behavioral school problems, and 15 good readers on an auditory shadowing task. Poor readers were identified by a performance of at least two years below expected reading level on the *Spache Diagnostic Reading Scales*. Good readers read at or above expected grade level and exhibited no behavioral problems. Groups were matched for age (range 8 to 11 years), race, and socioeconomic status, and were within the normal IQ range on the *WISC-R*. Average reading level for the poor readers was 2.6; for the behavior problem group, 3.8; and for the good readers, 5.6. Each child shadowed six single messages, three with the right ear and three with the left ear, and six message pairs. In the message pairs situation, children listened to a recorded passage presented to one ear while simultaneously listening to a second passage presented to the other ear. In each condition, single or double message, children had two trials with materials below, at, and above current reading level. Percentage of total errors were tallied and used in repeated measures of analyses of variance to assess the effects of attention, attended ear, difficulty level of the passage, and group. All groups showed a right ear advantage. The good reader group made proportionately fewer errors than did the other two groups, but the other two groups did not differ from one another in percentage of total errors. Poor readers showed more errors on the double-channel presentation than on the single-channel presentation; the behavioral problem group made a significantly greater proportion of errors than poor readers when the single channel was employed, but the two groups did not differ when the two channels were used.

MAISTO, ALBERT A., & SIPE, SUZANNE. An examination of encoding and retrieval processes in reading disabled children. *Journal of Experimental Child Psychology*, October 1980, *30*, 223–230.

Examines the role of perceptual-processing and information-processing in the performance of eight disabled and eight nondisabled readers on a probe stimulus task. Disabled readers' average WISC-R scores were 109 and their scores on the WRAT-Reading averaged 15 points lower than their WISC-R scores. Nondisabled readers had average WISC-R scores of 105 and showed less than a 6-point spread between their WRAT—Reading scores and their IQs. All subjects were fifth-grade males. The stimuli were eight consonants presented in three memory load conditions. Intact stimuli were solid black images and degraded stimuli were masked by placing a checkerboard pattern over the intact stimuli. Four, six and eight consonants served as stimuli in sets of two, three, and four respectively. In each condition, half the items served as the positive set, while the remainder were the negative set. Positive set stimuli were shown

to the boys until they were sure they could identify the set. Then the probe stimuli were projected onto a screen and subjects verbally reported if the items were in the positive set. Reaction Time (RT) was the dependent variable. The RTs of nondisabled and disabled readers did not differ significantly. The RT for degraded stimuli was slower than RT for intact stimuli for both groups, but there was a significant interaction between group and stimulus guality. The effect of degraded stimuli was significantly greater for disabled readers. Set size decreased RT in a similar manner for both groups. The authors conclude that reading disabled children have more difficulty preprocessing, or forming an internal representation of probe stimuli, if the stimuli are degraded by visual noise. They argue that these results support the hypothesis that reading disabled children do not have difficulty in central or perceptual processing, but that their primary problem is the encoding process.

McClure, Judith; Kalk, Michael; & Keenan, Verne. Use of grammatical morphemes by beginning readers. *Journal of Learning Disabilities*, May 1980, *13*, 262-267.

Examines the question of how do beginning readers use syntactic cues signaled by grammatical morphemes. Subjects of the experiment were 24 poor and 24 good readers, all first graders from 12 middle-class suburban schools. The poor readers' mean grade score on the *Comprehensive Test of Basic Skills* was 1.0 (range .3 to 1.8) and their average *Slosson Intelligence Test* (SIT) score was 114. The good readers' mean reading score was 2.1 (range 1.5 - 2.9) and their mean IQ was 123. Besided the SIT, all children were administered the Grammatic Closure subtest of the ITPA as a measure of speech production and the *Carrow Test of Auditory Comprehension of Language* as a measure of language comprehension. On the Carrow, the child is required to pick from three pictures differing only slightly, the one that goes best with an expression read to him/her. Subjects were also given eight of 16 possible word strings as a measure of sentence recall. These word strings were structured (in grammatical order), unstructured, lexical (meaningful), or nonsense. The dependent variable for this measure was the number of trials required to recall the strings perfectly. The two groups did not differ in sentence recall. Good readers produced more correct grammatical morphemes on the ITPA than poor readers, but the difference disappeared when IQ effects were partialed. More grammatical morphemes were comprehended (Carrow Test) by good readers than poor readers, even when IQ was controlled.

Levi, Gabriel, & Musatti, Tullia. Phonemic synthesis in poor readers. *The British Journal of Disorders of Communication*, April 1978, *13*, 65-74.

Correlates performance of normal and poor readers on four informal measures: 1) Self Dictation, writing 10 dictated sentences increasing in length and syntactic complexity; 2) Reading comprehension of three and five sentence passages; 3) Visual Tale, telling orally and then writing a story from a sequence of three drawings and 4) Oral Phonemic Synthesis (OPS) Test, pronouncing words after the phonemes of each of 25 multisyllabic words were pronounced. All tests were subjectively scored by the experimenters. Subjects were 24 poor and 24 normal readers identified by teacher judgment. Children were first year primary pupils (average CA = 7-0) enrolled in one primary school in a lower middle-class suburb of Rome, Italy. Average IQs on the *Columbia Test* were 93 for the poor readers and 95 for the normal readers. All intercorrelation coefficients, except Visual Tale & Self Dictation, which was not reported, were positive, high and significant (.78 to .87). The high correlation coefficients between Reading and OPS led the authors to conclude poor readers are incapable of re-utilizing oral language and of translating it into written language.

Hutson, Barbara A.; Cowger, Doris E.; & Wallbrown, Fred H. Assessing psycholinguistic orientation and decoding strategies for remedial and nonremedial readers. *Journal of School Psychology*, Fall 1980, *18*, 263-270.

Interviews remedial readers and non remedial readers to determine their acceptance of a psycholinguistic approach vs. a decoding approach to word attack in reading and also examines the word attack strategies they reported using. Psycholinguistic orientation was assessed by a four question interview ("When you read a sentence, do you ever skip a word?" "Should you?" "When you read a word, do you ever skip letters?" "Should you?"). To assess strategies subjects perceived they use for decoding, they were asked one question ("What do you do when you come to a word you do not know?"). There were 23 remedial readers (CA 8 and 9) and 105 non-remedial readers (CA 5 through 9). Remedial readers were pupils enrolled in remedial classes. Remedial readers were enrolled in a different school than non-remedial readers, thus no statistical comparisons of data were made. Neither group (except a few older non remedial readers) reported a willingness to skip words or letters, and the differences between remedial and non-remedial readers appeared minimal. Remedial readers reported more frequently than non-remedial readers that they use phonics cues when they encounter a difficult word. Non-remedial readers reported a wider range of decoding strategies.

KRIEGER, VERONICA K. Differences in poor readers' abilities to identify high-frequency words in isolation and context. *Reading World*, May 1981, *20*, 263–272.

Examines individual differences in poor readers' ability to read high-frequency words presented in isolation and context. There were two groups of subjects: 17 university reading clinic pupils reading one to three years below grade level on the Silvaroli *Classroom Reading Inventory*, and 13 suburban classroom pupils reading one to two years below grade level. Both groups read in isolation Allington's list of 96 function words, and within each group children were classified by their word recognition accuracy as accurate identifiers (90% to 95% accuracy for clinic children and 93% to 97% accuracy for classroom children) and inaccurate identifiers (65% to 85% accuracy for the clinic group and 82% to 89% accuracy for the classroom group). Children also read 65 of these 96 words in a 300 word story written at the second grade level of difficulty. All poor readers correctly identified more words in context than in isolation. Within the clinic group, the inaccurate identifiers identified significantly fewer words than the accurate identifiers both in isolation and in context. There was no significant difference between the accurate and inaccurate identifiers in the classroom in context.

MASON, MILDRED; PILKINGTON, CYNTHIA; & BRANDAU, RICHARD. From print to sound: reading ability and order information. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 580–591.

Examines whether reading ability vocalization latency (VL) differences are specific to alphabetic stimuli or are due to a more general perceptual factor. Subjects in the three experiments (20, 20, and 32) were all college students. Reading ability was assessed with the *Nelson-Denny Reading Test*. Stimuli in Experiments 1 and 2 were strings of three, four, and five letter words or digits projected onto a screen. VL to naming the word or number was the dependent variable. Experiment 2 was the same as Experiment 1 except the stimuli were exposed for a longer period of time. Less skilled readers were slower and less accurate on both word and digit tasks. Results were consistent with the hypothesis that the need to encode and process order information may be related to reading disabilities. This hypothesis was tested in Experiment 3 by giving paired-associate training for stimuli composed of three nonlinguistic symbols. In a no-order condition, identity of the symbols determined the response. In an order condition, the order of the symbols as well as their identity determined the response. After acquisition, subjects were required to name the stimuli as rapidly as possible. Highly skilled readers were significantly faster than less skilled readers only in the order condition.

SMITH, EDWARD E., & KLEIMAN, GLENN M. Word recognition: theoretical issues and instructural hints. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, 267–90.

Reviews literature on factors affecting adults' recognition of words for the purpose of developing an awareness of the skills children should be taught in order to become fluent readers. Proposes a general information processing model for adult skilled reading which includes among its stages feature extraction, interpretation, lexical access, working memory, and integration. Areas of research with potential instructional implications were noted, but the authors noted a lack of developmental findings which would permit them to bridge the gap from theory to instruction.

BLACHOWICZ, CAMILLE L. Z. Semantic integration: a comparison of normal and disabled readers. *Reading Psychology*, Summer 1980, *1*, 150–155.

Examines sixth grade pupils' ability to remember related sentences from which inferences could be drawn. Forty disabled and 40 normal readers were employed. Reading achievement was measured by the *Wide Range Achievement Test* and the *Gilmore Oral Reading Test*. All were within the normal IQ range as assessed by the *Slosson Intelligence Test*. Disabled readers were defined as those pupils reading 1.5 years below expectancy, while normal readers achieved at or above expectancy. All subjects read 10 sets of three-sentence paragraphs constructed from the Harris-Jacobson corpus of second grade words. All paragraphs conformed to the format: 1) A relation to B, 2) C relation to B, and 3) A equivalence or attribute (e.g., The birds sat on a branch. A hawk flew over it. The birds were robins). Three minutes after reading the 10 stories, children read a set of 40 sentences or statements, four related to each story. They reported if they had or had not read it. For each story there was a true statement, a false statement, a true inference and a false inference. There was no significant difference in the number of errors made by good and poor readers or in misrecognitions within any sentence type. There were significantly more true inference errors (e.g., A hawk flew over the birds) than any other type of error on the part of both groups. The author concludes that poor readers do not demonstrate poorer global memory than good readers, contrary to the findings of numerous other studies. The reason for the difference is that meaningful material was used, whereas other studies utilized non-meaningful stimuli.

BADCOCK, DAVID, & LOVEGROVE, WILLIAM. The effects of contrast, stimulus duration, and spatial frequency on visible persistence in normal and specifically disabled readers. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 495–505.

Investigates the effects of stimulus duration and degree of stimulus contrast on the duration of visible persistence as a function of spatial frequency. Subjects in Experiment 1 were 14 year-old boys, 12 controls and 12 specific-reading-disabled (SRD) boys. SRD was defined as a pupil with normal ability and background who reads at least 2.5 years below grade level. Average *Ravens Progressive Matrices* IQ for SRDs was 97 and for controls, it was 104. The SRDs had a mean reading age lag on the *Neale Analysis of Reading Ability* of four years eight months. Controls were selected on the basis of school records and teacher reports. Duration of visual persistence was determined by measuring the temporal separation between two successively presented stimuli at which subjects could identify a blank between two stimuli. The stimuli were two identical sine-wave gratings presented at varying spatial frequencies (a vertical sinusoidal grating of 1, 2, 4, 8 and 12 cycles per degree of visual angle). SRDs had longer durations of visible persistence at low spatial frequencies and relatively shorter durations at high spatial frequencies. In Experiment 2, there were two groups

of nine boys, selected as in Experiment 1. SRD boys had an average IQ of 97, controls 106. The average reading age lag of SRDs was 4.5 years. In Experiment 2, only two spatial frequencies were used (2 and 12 cycles), but there were varying levels of contrast. The results of Experiment 2 indicated the effects of Experiment 1 were exaggerated at low contrast levels and were greatest with stimulus durations that approximate fixation durations in reading. For SRDs, reducing contrast increased duration of visible persistence at low spatial frequencies but decreased visible persistence duration at high spatial frequencies. The authors concluded that there are differences between normal and disabled readers in basic visual processes.

BIERSNER, ROBERT J., & LAROCCO, JAMES M. Determinants of reading performance and achievement. *Perceptual and Motor Skills*, June 1980, *50*, 715–721.

Administers verbal, nonverbal, demographic and eye-hand laterality measures to 34 Navy recruits attending a remedial reading (RR) program and 53 regular recruits. The remedial readers had been originally screened with the *Gates-MacGinitie Reading Test*, which was also given after six weeks of remedial reading instruction. The tests given were: The *General Classification Test* (Verbal IQ), the *Raven Progressive Matrices* (Nonverbal IQ), and a 16-item test of handedness. Data on race, years of education, and use of other languages in the home were also collected. The two groups differed significantly in education, race (no regular recruits were non-white, 35% of the RRs were), verbal IQ, nonverbal IQ, lateral consistency, and handedness. Pretest to posttest differences were related only to race, with non-Caucasians improving more than Caucasians.

DEAN, RAYMOND S. Cerebral lateralization and reading dysfunction. *Journal of School Psychology*, Winter 1980, *18*, 324–332.

Examines the laterality preference patterns and types of oral reading errors for 90 white seventh grade males. Subjects were divided into three groups for analytical comparison: "good" readers (at or above placement on the *California Aptitude Test*, reading comprehension subtest), "difference poor" readers (two or more years below grade level in comprehension), and "deficit poor" readers (comprehension different plus one or more years below level in Reading vocabulary score). Assessment measures included the *Dean Laterality Preference Schedule* and recorded oral reading errors on selection J of the *Sucher-Allred Reading Placement Inventory*. All subjects were individually administered the *WISC-R*. Difference poor readers were found to be significantly more bilateral than either good readers or deficit poor readers. Good readers outperformed both poor reader groups on WISC full scale performance, while deficit poor readers scored significantly better than difference poor readers on the Performance scale, and difference poor readers were significantly better than deficit poor readers on the Verbal scale. Significant main effects obtained for leading groups in oral reading errors ($p < .001$) as was expected. The two poor reader groups did not differ in total errors; both made a greater number of oral reading errors than did good readers. Deficit poor readers made significantly more errors of omission, substitution, repetition, inversion, and mispronunciation than did difference poor readers. Insertion errors were more prevalent among difference poor readers than either of the other groups, who did not differ.

BYRD, P. DIANNE; BUCKHALT, JOSEPH A.; & BYRD, E. KEITH. Age differences in WISC-R subtest ranks of children experiencing academic difficulties. *Psychological Reports*, April 1981, *48*, 599–604.

Analyzes WISC-R subtest patterns of 385 children referred for academic difficulties. Three age groups were created: 6 to 8, 9 to 12, 13 to 16. Two IQ groups

were also created: IQ less than 76 (N-167), and IQ greater than 75 (N-218). No overall differences in subtest ranks between children low and high in intelligence were found. Differences were discovered, however, which seemed to be related to chronological age. The writers questioned the generalizability of so-called "characteristic" subtest profile-patterns of children experiencing academic difficulties.

BALE, P. Pre-natal factors and backwardness in reading. *Educational Research*, February 1981, *23*, 134–143.

Classifies 82 backward readers by their performance on three unnamed tests of perceptual and perceptual-motor ability. After analyzing the data and concluding that difficulties could be neurologically based, a questionnaire about prenatal and perinatal characteristics was administered to the parents of the retarded readers and to the parents of 82 control boys. The two groups were of similar age (113 months) and IQ and were all middle class English junior school boys. The backward readers had an average reading age (on the Schonell test) of 81 months, while the average for the control group was 128 months. The backward readers were subdivided according to the number and severity of their scores on the perceptual motor tests. With the exception of low birth weight, differences between the normal and all the backward readers did not reach the level of significance. In contrast, when only the backward readers with perceptual motor difficulties were compared to normal readers, the incidence of toxemia during pregnancy, difficulties during labor, prematurity and low birth weight were significantly higher in the perceptually motor-impaired backward readers. These findings supported the hypothesis that backward readers with poor perceptual motor abilities are most likely to have a history of prenatal and perinatal difficulties, and it is these difficulties that are thought to cause neurological impairment.

LEFTON, LESTER A.; NAGLE, RICHARD J.; JOHNSON, GWENDOLYN; & FISHER, DENNIS F. Eye movement dynamics of good and poor readers: then and now. *Journal of Reading Behavior*, Winter 1979, *11*, 319–328.

Analyzes differences in the eye movements of 13 third graders, 16 adequate reading fifth graders, 17 poor reading fifth graders, and 18 college undergraduate psychology students while reading two EDL paragraphs appropriate to subject's school placement. Subjects were tested in two sessions one year apart. Comprehension was assessed by means of 10 yes-no questions about each paragraph. Results indicate that speed, comprehension, and eye movement characteristics improved for all groups over a year of development, but that the eye movements of normal readers were more efficient and systematic than those of the fifth grade poor readers. Poor readers made the largest number of fixations for longer durations. They performed more poorly than third graders in many instances. Improvements for poor readers were minimal over the year.

STEINERT, YVONNE E.; CAMPBELL, SUSAN B.; & KIELY, MARGARET C. A comparison of maternal and remedial teacher teaching styles with good and poor readers. *Journal of Learning Disabilities*, January 1981, *14*, 38–42.

Observes and compares the teaching styles of mothers and teachers with good and poor readers. A sample of 13 poor readers, ages 7-2 to 9-11, was matched with 13 good readers on the bases of age and social class. The two groups differed on reading achievement scores as determined by the *Metropolitan Achievement Test* and on two factors, inattentive-passive and hyperactivity, on the *Connors Teacher Questionnaire*. Each child was observed in parallel teaching situations with both his mother and a remedial teacher on two separate occasions. Both mothers and teachers taught parallel forms of an anagram task, a card game, and a parquetry design. Ten minutes was allotted for each task. Sessions were videotaped and audiotaped; maternal, teacher,

and child behaviors were coded according to predefined behavior categories. Mothers and teachers differed in their teaching style. Teachers gave more original information, spent more time teaching the tasks, more often made specific suggestions in statement form, and asked more focusing questions than did mothers. Teachers were also more positively reinforcing than mothers. When poor and good readers were compared, the only differences noted were that mothers and teachers provided more information and more negative feedback to poor readers. Behaviors of good and poor readers did not differ significantly.

BISHOP, D. V. M.; JANCEY, C.; & STEEL, A. McP. "Orthoptic Status and Reading Disability." *Cortex*, December, 1979, *15*, 659–666.

Surveys the orthoptic, intellectual and reading abilities of 147 rural English children whose average CA was approximately eight-and-a-half. The purpose of this study was to determine if reading disability is related to orthoptic deficiencies. The subjects were unselected and were a subset of a larger sample taking part in a longitudinal study. All children were administered the WISC-R, the *Neale Analysis of Reading Ability* and seven tests of orthoptic ability: 1) the Snellens (visual acuity); 2) the Cover test (to detect squint); 3) a convergence test; 4) the TVO random dot stereotest (for stereopsis); 5) a sighting eye test; 6) the Clement Clark fusion slides, a test of the reference eye (the eye that dominates, or maintains the image, when two fused images are moved so that fusion is no longer possible) and 7) a test of hand preference. The average IQ of the group was 97 and the mean reading score (reading age subtracted from chronological age) was −0.7 months. There were varying numbers of children who demonstrated difficulties on the tests of acuity, squint, convergence, and stereopsis, but none of these difficulties was associated with IQ or reading. Using the results of the sighting eye test and the hand preference test, no association between hand-eye dominance (left-left, right-right) or crossed dominance and reading was found. Using the results of the reference test, it was found that predominantly crossed referenced and predominantly uncrossed referenced children had significantly lower IQs. There was no significant reading score differences for these children and for children with mixed reference when IQ was used as a covariate. The authors also matched, *post facto*, a group of seventeen poor readers to seventeen good readers. No significant orthoptic differences were found. The authors conclude that convergence deficiency, defective stereopsis, and crossed reference are not associated with reading problems.

IV-15 Socio-cultural factors and reading

NINIO, ANAT. Picture-book reading in mother-infant dyads belonging to two subgroups in Israel. *Child Development*, June 1980, *57*, 587–590.

Studies social class (SES) differences in Israel of mother-child verbal interactions in the context of the joint picture-book reading. Subjects were 40 mother-infant dyads, 20 low SES Oriental and North African extraction Jews and 20 middle SES European extraction Jews. All infants were Jewish and first-borns with 10 males and 10 females in each SES group. Average infant CA was 19 to 20 months, and the range was 17–22 months. Each dyad was observed once at home. Mothers were given two picture books and told only "to look at the books" with their infant. After finishing those, mothers were given one other book and asked to elicit from their infants "all the words he knows which are shown in the book." Three measures of book reading vocabulary were obtained: productive, imitative, and comprehension. These were measured by the number of words the infant produced, imitated, or pointed to. Content analysis revealed the most frequent interaction formats were mothers'

questions of "what's that?," "where's that," and labeling statements. Low SES mothers talked less and provided less varied labels for actions and attributes. They asked fewer "what" questions. High SES infants had a larger productivity vocabulary, and low SES infants had a larger imitative vocabulary.

CHAN, JIMMY. Parenting styles and children's reading abilities: a Hong Kong study. *Journal of Reading*, May 1981, *24*, 667–675.

Investigates the hypothesis that there are significant relations between parental behavior and adolescents' verbal and reading abilities. Subjects of the study were 113 students, CA 12-2 to 18-3, who attended Form III in Anglo-Chinese schools in Hong Kong. They were administered the *Reading Abilities Test* in Chinese. This test has four scores: Recognition, Recall, Free Expression, and General Reading (overall total of first three). Parental behavior was assessed with the author's *Parent Image Differential* (PID) Test. The PID is based on the semantic-differential process, and assesses three categories each for the father and the mother: treatment of the child, approach to teaching the child, and attitude toward child discipline. Factor analysis yielded two factors for each of the three concepts, making a total of six factors for each parent: for treatment of the child, concern and restricted; for teaching approach, democratic and demanding; for discipline, autocratic and rational. The PID was administered to the adolescents who were to recall their interactions with their parents. Although many of the PID measures correlated significantly with each other, only four of the 48 correlation coefficients between PID and reading were significant, and the highest of these was only .25.

HEWISON, JENNY, & TIZARD, J. Parental involvement and reading attainment. *The British Journal of Educational Psychology*, November 1980, *50*, 209–215.

Examines the relationship between home background factors and reading ability on three samples of seven- to eight-year-old English infant school or junior school pupils. All children included in the three studies came from white, native English speaking families and resided in very homogeneous working-class areas (N = 63, 100, and 104). In each sample, mothers were interviewed about attitudes toward child's play and discipline, sharing of activities and conversation, reading to children, hearing children read to them, and their child's use of leisure time activities. Various measures of reading achievement were administered (the *Southgate Reading Test*, the *NFER* Test A, and an unreported test). WISC scores and maternal language measures were obtained for one sample. The home background factor that emerged as most strongly correlated with reading was whether or not the mother regularly heard the child read ("coached"). Children with higher IQs received a greater amount of coaching (point biserial correlation coefficient = .37), but IQ did not significantly contribute over and above coaching in a multiple regression analysis. Maternal language was also correlated with reading achievement (.23 for the "Chat" scale and .33 for the "Awkward Questions" scale), but like IQ, mothers with superior language were more likely to coach their children. When coaching was partialed out in multiple regression analyses, maternal language was not significantly correlated with reading. Coaching or hearing a child read accounted for 36% of the variance in reading achievement, a far greater amount than any other home background factor.

REIMONDI, ROBERT A.; LOCKWOOD, BROOKE W.; & BRANNIGAN, GARY G. Family involvement in academic remediation. *Academic Therapy*, March 1981, *64*, 401–408.

Presents information on one nine-and-a-half-year-old girl with average WISC-R scores and average performance on the ITPA and the *Wepman Auditory Discrimination Test*. Her only below average performance was on the Spache *Diagnostic Reading Scales*. The diagnosticians concluded that there were family problems

affecting her performance. The intervention treatment included direct family therapy which stressed need for communication, enhancing the child's familial position, developing conflict resolution skills and improving the marital relationship of the parents. There was also a coordination of family and school efforts. It was reported that after four months of such treatment, the girl's school work and academic performance improved, the family interrelationships improved, and she was happy. Her reading performance improved from third grade to 4.5 She began to perform at grade level in all subjects.

ENTWISLE, DORIS R., & HAYDUK, LESLIE Alec. Academic expectations and the school attainment of young children. *Sociology of Education*, January 1981, *54*, 34–50.

Examines the schooling process of five cohorts of children as they progress through first grade. The data for the study came from all children who started first grade in one white middle-class school for five successive years. These data were aggregated in order to obtain a sufficiently large number of cases. IQ (SRA *Primary Mental Abilities*) and parents' school expectations for their child were assessed early in the school year. Peer rating was assessed in the middle of the second semester. The child's school expectations and marks (reading, arithmetic and conduct) were both collected near the end of each semester. Parents and teachers had more influence on children's expectations than peers or children themselves, but altogether children's expectations were not well determined. There was considerable continuity in children's performance levels from the first report card to the end of the first grade year. This suggested that even the earliest marks children receive can be strong determinants of future evaluations and that teachers' earliest formal evaluations may play a leading role in determining achievement levels of young children. The authors created a block recursive model. According to the model, conduct appears to play a key role in determining levels of performance in reading and arithmetic. The children's earliest marks in reading and arithmetic responded to the conduct mark, and the influence of IQ and gender was mediated through conduct. Once established, marks tended to persist. Implications of this style of modeling for understanding school differences are discussed.

BANNER, C. N. Child-rearing attitudes of mothers of under-, average-, and over-achieving children. *British Journal of Educational Psychology*, June 1979, *49*, 150–155.

Examines the relationships between child rearing attitudes of 191 Canadian mothers and the reading math achievement of their sixth grade children (103 sons and 88 daughters). Classifications of underachiever, achiever, and overachiever were based on the regression-equation method using verbal plus nonverbal scores of the *Canadian Lorge-Thorndike Intelligence Test* and reading plus math scores from the *Stanford Reading Test*, Intermediate II, and the *Canadian Test of Basic Skills*. All mothers completed the *Parental Attitude Research Instrument* (PARI). Items of the PARI which discriminated significantly between the three achiever levels groups were subjected to factor analysis. Data for mothers of sons and mothers of daughters were processed separately. Results indicate that mothers of underachieving sons and daughters are more dominant, rigid, and restrictive than mothers of achievers or overachievers. For the mothers of underachieving sons this takes the form of possessiveness and intrusiveness. For the mothers of underachieving daughters this was manifested in a pattern of overprotection.

WALBERG, HERBERT J.; BOLE, ROBERT E.; & WAXMAN, HERSHOLT C. School-based family socialization and reading achievement in the inner city. *Psychology in the Schools*, October 1980, *17*, 509–514.

Assesses the effects of a school-based parental program on the reading achievement test scores of black inner-city children in 41 classes, grades one through six. *The Iowa Tests of Basic Skills* reading comprehension scores on 826 black children were regressed on their scores of the reading comprehension test taken one year earlier, on amount of parental exposure to program helping parents, and on pupil sex, grade level, class size, and percent of males in class. Two variables, prior reading comprehension and degree of intensity of parent exposure, accounted for most of the reliable variance in the posttest scores.

IV-16 Reading interests

GREANEY, VINCENT. Factors related to amount and type of leisure time reading. *Reading Research Quarterly*, 1980, *15*(3), 337–357.

Investigates the relationship between the amount of time devoted to leisure reading during a three-day period and such variables as gender, level of reading achievement, leisure activities, socioeconomic status, family size, televiewing, and type of school attended. The 920 pupils in Irish primary schools recorded time spent on different leisure activities in diaries. They devoted an average of 5.4% of available time to reading in three categories: book reading, comic reading, and, to a much lesser extent, newspaper reading. Gender, reading achievement, attendance at a girls' school, and library membership had the strongest relationships with book reading. The strongest relationship for comic reading was with televiewing. Girls tended to spend more time reading books; boys, comics. Profiles of book and comic readers were included.

NGANDU, KATHLEEN M. Why do kids read? *Reading Horizons*, Winter 1981, *21*, 128–133.

Discusses the findings of a two part investigation describing and comparing the interview responses of 257 Nebraska pupils, grades one through six, with the written responses of 115 Nebraska teachers concerning the reasons elementary children read. The pupils gave greater priority to reading for knowledge and survival in school and life than to personal development, pleasure, or shared experience. The teachers placed approximately equal emphasis upon survival, knowledge, pleasure, and personal development. No significant difference in reasons for reading was identified by ability level or sex, although the percentage of preference for pleasure reading was only 13% for above average readers and 8% for below average readers.

BLEICH, LINDA. The developmental role of adolescent literature. *Texas Tech Journal of Education*, Winter 1980, *7*, 39–47.

Reviews the heuristic and empirical literature pertaining to the question: Does adolescent literature address issues characteristic of its intended audience? Considers the major topics: roles of adolescent literature, psychological and social dimensions of adolescence, psychosocial developmental processes and adolescence, and needs and nature of reading interests and responses.

ELLIS, W. GEIGER, & BLAIR, PHYLLIS K. Student preferences for literature study foci. *Texas Tech Journal of Education*, Winter 1980, *7*, 49–55.

Describes the nature and results of the administration of a paired item forced choice preference inventory given to 264 girls and 264 boys, grades nine through twelve, who were classified by professional personnel into three school ability levels. The forced choice instrument presented the following five foci of literature teaching in their ten paired combinations: author, ideas expressed, structure/

form, historical period, and feeling of the reader. The following priority of preferred foci appeared which was similar for boys and girls: (1) feelings (2) ideas (3) historical (4) author + structure. Older students had more definite opinions about their preferences. Average and better ability students had more definite opinions about their preferences; feelings and ideas, in that order, were most preferred and structure/form least preferred. Low ability students failed to develop any significant preferences.

BEYARD-TYLER, KAREN C., & SULLIVAN, HOWARD J. Adolescent reading preferences for type of theme and sex of character. *Reading Research Quarterly*, 1980, *16*, 104–120.

Presents the results of two related, same subjects, studies which made use of paired story synopses to investigate preferences of 576 seventh, ninth, and eleventh grade students for positive vs. negative problem solutions (first study), and male vs. female protagonist (second study). Synopses were approximately 100 words in length and fell at a 5.5 to 6.0 Dale-Chall readability. Data were subjected to analysis of variance to test for difference by grade level, sex, and school district. In the first study, no significant main effects or interactions were obtained, but results reflected a consistent and similar preference pattern of positive solution or endings themes across all groups ($p < .001$). In the second study, significant preference for own sex protagonist was revealed by both boys and girls ($p < .001$). Significant interactions by grade ($p < .05$) reflected an increasing preference for male protagonist for boys as they get older, while girls reflect a decreasing preference for female protagonists as they move through adolescence.

HILL, L. E. A readability study of junior school library provision related to children's interests and reading abilities. *The British Journal of Educational Psychology*, February 1981, *51*, 102–104.

Relates the 4,793 library books of a junior school to the scores of the *Schonell Silent Reading Tests*, and the results of a reading interest questionnaire completed by 258 pupils, ages 7 to 11 years. The books were classified into types of fiction books and topics of information books. Readability of the sources was estimated by applying a modified Fry readability estimation to a 5% sample of books stratified by category and placement. Comparing readability estimates with reading age scores on the Schonell tests, revealed on incompatibility significant at $p < .01$ level. Readability placement of most sources was above 11.0 whereas reading ages ranged between 8 and 11 years. Results also indicate widespread reading interests over the fifty categories. Subjects reported twice as many books for least popular as for favorite genres. A significant negative correlation of $-.65$ existed between pupil choice of topic and library supply.

ABRAHAMSON, RICHARD F. An analysis of children's favorite picture storybooks. *The Reading Teacher*, November 1980, *34*, 167–170.

Analyzes the 50 books from "Children's Choices for 1979" by categorizing each according to story structure using an eight category schema. The eight categories and the percentage of books classified in each category were: confrontation, 28%; plotless, 12%; quest, 6%; and origin stories, 2%. It was concluded that fantasy and humor are important in children's self-selection of books. Also concludes that children do select quality literature that is beautifully illustrated and sensitively written.

WENDELIN, KARLA HAWKINS. Taking stock of children's preferences in humorous literature. *Reading Psychology*, November 1980, *2*, 34–42.

Examines the relationship between grade level, sex, and preference for and perception of selected elements of humor for 150 second, fourth, and sixth grade children. Two picture books each were selected and classified into the following four humor categories: absurdity, verbal humor, human predicament, and incongruity.

Children viewed the book while listening to a taped presentation of it. Following the tape, they were asked first to rank the story on a five item scale from "very funny" to "not funny at all," and then to tell what, if anything, was funny about it. After hearing the tapes, two at a time over four sessions, pupils were asked to select their favorite book. One-way analyses of variance and Duncan's New Multiple Range Test were used in analyzing the data. Significant differences were found by grade level for human predicament, absurdity, and incongruity but not for verbal humor. No significant sex difference preferences were found for any of the four types of humor. No significant differences were found by grade level for ability to perceive human predicament, absurdity, and incongruity. However, fourth and sixth graders were found to perceive verbal humor to a greater degree than second graders. The author noted that a wide range of individual differences in preferences for humor appeared.

STALMA, ANGELINE. Reading interests of second-graders, revealed! *Early Years*, May 1981, *11*(9), 75.

Conducts an informal survey of the reading preferences of 52 second graders. They were asked to rate 12 types of children's books. The most popular category was "Nonsense and Fun," the least popular was "Other Children." Boys preferred sports stories best with nonsense and fun stories as their second choice; girls chose nonsense and fun stories as their first choice and make-believe stories next.

PRIBIC, RADO. Young people's literature in the Federal Republic of Germany today. *Journal of Reading*, January 1981, *24*, 304-307.

Reports upon the type of content of current best selling books for West German young people today and gives examples of each type. The majority of these books deal with one of four topics: terrorism; minorities and other groups of "outsiders"; the career world; and personal, psychological conflicts intertwined with social issues. The most popular genres are the youth novel and the youth story. Other topics and genres represented in books for young people include male-female relationships, historical fiction and nonfiction, educational and reference books. Similarities can be found between the youth literature in the Federal Republic of Germany and popular youth literature in other countries.

ZBONIKOWSKA, DOROTA. Scientific-popular reading among Polish adolescents. *Journal of Reading*, February 1981, *24*, 395-397.

Reports on two studies of the personal reading of popular science materials by Polish secondary students. In the first study of 385 students, ages 17-19, who responded to a questionnaire survey, 82% reported reading one or more popular science books during the previous three years. Biology books were reported at least twice as frequently as the other sciences, a result possibly traced to a parallel proportion of sources in the school library. The second study compared an experimental group of 22 students in an academic secondary school with an equated control group following the same curriculum. The criterion consisted of an academic test over related concepts and information. The experimental group teacher instructionally propagated reading in popular science and handed out a recommended reading list. The experimental group obtained statistically significant higher scores on the academic test ($p < .05$).

STEVENS, KATHLEEN C. Reading interests among fifth and sixth grade children. *Reading Horizons*, Winter 1981, *21*, 147-150.

Details the results of a reading interest survey of 93 fifth- and sixth-grade pupils from a small midwestern city. Modal and median reading performances for the subjects were slightly above norms. Two instruments were employed: the Asher and Markell picture rating scale of interests and a Likert type rating questionnaire presenting the same 30 topics as the picture scale. Mean scores are presented tabularly for

topics by sex. Overall score differences ranged from a low of 5.57 (skyscrapers) to a high of 12.08 (outer space), and reflected modest gradual differences between ranked preferences. Fifteen of the 30 topics produced sex differences in interests significant at $p < .05$.

ROSS, ELINOR P.; & FLETCHER, RICHARD K. Reading preferences of children in the intermediate grades. *The Reading Instruction Journal*, Winter 1980, *23*, 45–49.

Reports the results of an anonymous response questionnaire survey of reading interests for 1,334 children in grades four, five, and six in schools in three Tennessee counties. Results were anlayzed for basic patterns, sex, and socioeconomic differences. The instrument was administered orally to groups. Of the eleven choice categories presented, the most popular types for the total group were: mystery, funny stories, adventure, animals, riddles puzzles, and sports. Male and female preferences were similar concerning the popularity of mystery and hunor, but boys preferred sports and science materials while girls preferred fairy tales, stories about children, and poems. Some lesser differences in preference occurred between students from socioeconomic backgrounds. Basic findings are detailed in two tables.

IV-17 Attitudes and affect toward reading

HALADYNA, TOM, & THOMAS, GREG. The attitudes of elementary school children toward school and subject matters. *Journal of Experimental Education*, Fall 1979, *48*, 18–23.

Ascertains attitudes toward school and seven school subjects of 2,845 pupils, selected from the classes of 350 elementary and junior high school teachers in Oregon. The measure of attitudes was an inventory, called ME, devised by the authors. Each of the five (reading, math, physical education, art and music) or seven (additionally social studies and science) scales of ME is based on responses to five items. The responses required marking one of three faces: happy, neutral or sad. The internal consistency alphas for the ME scales range from .69 to .89. Attitudes toward school declined from grades one through seven, particularly for boys. The sharpest drop was between first and second grades, but there was also a large drop between sixth and seventh grades. The least positive attitudes were towards social studies, whereas art and physical education were held most positively.

PIERSON, HERBERT D.; FU, GAIL S.; & LEE, SIK-YUM. An analysis of the relationship between language attitudes and English attainment of secondary students in Hong Kong. *Language Learning*, December 1980, *30*, 289–316.

Analyzes the relationship between English language attainment and attitudes toward English among Chinese-speaking (Canton dialect) secondary school students in Hong Kong. Subjects were 431 Form IV (10th grade) students from both English-medium and Chinese-medium schools. Attitude measures were obtained by use of both direct and indirect means. Attitudes toward English were measured directly by means of a series of statements concerning the study and use of English to which students were asked to respond on five-point scales. Indirectly, attitudes were measured with a scale of stereotypes. English attainment was assessed by a cloze procedure. Results of factor analysis of the direct attitude questions regarding English showed that several of these attitude factors are significantly related to English attainment as measured by the cloze test. In general, the statistical results of this study indicated that the direct measure of attitude was a better predictor of English attainment than an indirect measure.

DWYER, EDWARD J., & JOY, FLORA. Reading attitudes across a broad age spectrum. *Reading Horizons*, Fall 1980, *21*, 39-43.

Reports the results of administering the *Estes Attitude Toward Reading Scale* (1971) to six groups, each comprised of 200 subjects: Group 1 = 1971 sixth grade pupils; Group 2 = 1978 sixth grade pupils; Group 3 = students enrolled in a college reading improvement course; Group 4 = freshmen enrolled in college English courses; Group 5 = men and women of age 60 or older; and Group 6 = high school graduates, ages 18 through 22, who never enrolled in college. Mean scores were substantially lower for Group 6 than for any other group. A group high mean score of 80 was obtained by Group 5. Both of the sixth grade groups evidenced highly positive attitudes toward reading (77.6 and 77.9), even though a substantial portion of these pupils came from lower socioeconomic strata.

SCHOFIELD, HILARY L. Reading attitude and achievement: teacher-pupil relationships. *Journal of Educational Research*, November/December 1980, *74*, 111-119.

Assesses the validity of conflicting hypotheses concerning the efficacy of maximizing both cognitive and affective outcomes through reading instruction. Measures of reading achievement (Australian Council for Educational Research's (ACER) *Co-op Y Reading Comprehension Test*) and attitudes toward reading and its teaching (Test SD, a semantic differential instrument) were administered to 251 final-year Australian student teachers. Twice during the following year, measures of reading achievement (ACER's *Primary Reading Survey Tests*) and attitude toward reading (*Children's Attitude Booklet*) were administered to approximately 900 grade four through six pupils of 48 of these teachers. Analysis of variance revealed significantly higher ($p < .001$) pupil reading achievement for teachers with high reading comprehension in both April and October testings. By October, teacher attitude toward reading was significantly and positively related ($p < .05$ to .001) to pupil reading achievement. Relationships between teacher reading attitudes and pupil reading attitudes were more complex and diverse, but pupils of low attitude teachers expressed greater proximity between themselves and their own reading ($p < .05$) and viewed reading as "closer to nice things" ($p < .01$) than pupils of middle and high attitude teachers.

IV-18 Personality, self-concept, and reading

FOSHAY, WELLESLEY R., & MISANCHUK, EARL R. Toward the multivariate modeling of achievement, aptitude, and personality. *Journal of Educational Research*, May/June 1981, *74*, 352-357.

Employs a multivariate statistical model to investigate the relation between achievement, aptitude, and personality. This was a replication of earlier studies, with the refinement of instrumentation, however. Subjects were 492 college students. The independent variables were: eight tests of personality, SAT Verbal scores, SAT Mathematical scores, grade point average (GPA), sex, and name of course in which subject was enrolled. The criterion (dependent) variable in the stepwise multiple regression was the final grade in the course. GPA, SAT Math and two of the eight subtests of the personality inventory (time spent at work, incentives to achieve) were significant predictors of course grades.

FOWLER, JOSEPH W., & PETERSON, PENELOPE L. Increasing reading persistence and altering attributional style of learned helpless children. *Journal of Educational Psychology*, April 1981, *73*, 251-260.

Attempts to determine whether a direct method of attribution retraining used with learned helpless children is more effective than an indirect method in increasing persistence and altering attributional style. Subjects were 28 children in grades four, five, and six who were identified as most helpless from an initial pool of 79 children. Identification was based on the *Intellectual Achievement Responsibility Scale* (IAR) (34 items) and a 5-item *Effort Versus Ability Failure Attribution* scale of reading. Additionally, all pupils were reading below grade level on the *Iowa Test of Basic Skills*. Subjects were assigned randomly to one of four treatments: 1) N1, partial reinforcement with single failure lengths; 2) N3, partial reinforcement with multiple failure lengths; 3) N3AR, partial reinforcement with multiple failure lengths and indirect attributional retraining; and 4) N3DAR, partial reinforcement with multiple failure lengths and direct attributional retraining. Subjects read orally a series of sentences under treatment conditions for three days. There were significant increases in reading persistence for children who received attributional retraining compared to single failure length control children. Direct attribution retraining was found to be more effective than no attribution retraining in increasing pupils' attributions to effort on the IAR scale.

LANGHAM, JOAN, & STEWART, WARREN. Television viewing habits, and other characteristics of normally aggressive and non-aggressive children. *Australian Psychologist*, March 1981, *16*, 123–133.

Compares the television viewing habits of normally aggressive and non-aggressive children. Children attended five schools in metropolitan Newcastle, Australia. They were selected by teachers who identified aggressives and non-aggressives by criteria and descriptions provided by the experimenters. There were 80 children between the ages of seven and eight and 80 between 10 and 11. Equal numbers of boys and girls were in each age group. Data were obtained with a pupil questionnaire or from teachers. Normally aggressive children were found to have quite different TV viewing habits than non-aggressive children. They preferred violent programs and characters, stayed up later, and typically their homes received a wider range of commercial TV stations. They saw their favorite character as being more physically violent, whereas non-aggressive children saw him as more empathetic. Aggressive children also had more unskilled fathers, more fathers absent from home, and achieved in class at a lower standard. The results showed that aggressive children have a different life style from non-aggressive children.

WADE, BARBARA E. Highly anxious pupils in formal and informal primary classrooms; the relationship between inferred coping strategies and: 1—cognitive attainment. *The British Journal of Educational Psychology*, February 1981, *51*, 39–49.

Administers questionnaire measures of anxiety motivation together with cognitive tests of English, mathematics, and reading to 956 primary school pupils in classes taught by 12 teachers representing formal, 13 teachers representing informal, and 12 teachers representing mixed teaching styles at the end of the third year and in May of the fourth year in primary school. Tests administered included: the *Edinburgh Reading Test*, Stage 3, the *Mathematics Attainment Test*, DE2, the *English Progress Test*, D3, and two measures devised by the author and tested in three pilot studies, an Anxiety scale and a Motivation scale. Based on the premise that self-report measures of "anxiety" and "achievement motivation" may be indicative of coping strategies, zonal analyses of post-test data were carried out separately by sex and within teaching style. Results showed higher levels of attainment for highly anxious highly motivated pupils (an inferred coping strategy of approach) than for highly anxious low motivated pupils (an inferred coping strategy of avoidance). Further analyses indicated a close

link between anxiety, motivation and ability for girls, a finding interpreted in terms of sex-related conformity, but for boys considerable discrepancies in attainment in relation to the inferred coping strategies were still in evidence at the lower ability level under all teaching styles. At the upper ability level significant discrepancies in attainment were shown only for boys in formal classrooms, where an inferred coping strategy of "approach" was found to be associated with the highest level of attainment and an inferred coping strategy of "avoidance" was associated with the lowest level of attainment.

SILVERN, STEVEN B.; BROOKS, DOUGLAS M.; GRIFFIN, ANNA; & LEE, CAROLE. Classroom contextual drawings as predictors of pupils' academic achievement. *Perceptual and Motor Skills*, April 1980, *50*, 403-406.

Compares the size of pictures drawn by high and low achieving fourth graders. The 75 children, drawn from two lower-middle class schools, were asked to draw two pictures of themselves: one doing their mathematics and one doing their reading. Math and reading ability were determined by marks during 12 weeks of previous instruction. High achievers in math and high achievers in reading drew larger pictures of themselves than did low achievers.

TESINY, EDWARD P.; LEFKOWITZ, MONROE M.; & GORDON, NEAL H. Childhood depression, locus of control, and school achievement. *Journal of Educational Psychology*, August 1980, *72*, 506-510.

Examines the relationship between childhood depression and locus of control both as they relate together and to measures of achievement and intelligence among 452 male and 492 female fourth and fifth grade pupils representing three levels of socioeconomic status. Depression was assessed via a group administration of a peer nomination inventory (PNID). Locus of control was assessed with the *Children's Nowicki-Strickland Locus of Control Scale*. I.Q. was obtained via group administration of the *Goodenough-Harris Draw-A-Person Test*. Measures of school achievement were obtained from school records of standardized reading and math scores and a teacher rating of work study habits. Pupils with external orientation revealed significantly lower coefficients with reading, math, work study habits and figure drawing I.Q. ($p < .001$). Higher indications of peer assessed depression characteristics revealed similar significant relationships. The depression measure correlated modestly with externality in locus of control at +.19 which was significant at the $p < .001$ level.

IV-19 Readability and legibility

TRAPINI, FRED, & WALMSLEY, SEAN. Five readability estimates: differential effects of simplifying a document. *Journal of Reading*, February 1981, *24*, 398-403.

Compares the readability scores of five readability formulas for a Blue Cross Blue Shield pamphlet rewritten by four methods. The five formulas were the Dale-Chall, Harris-Jacobson, Fry, SMOG, and Flesch. The four versions of the pamphlet were: 1) objective: synonym substitutions, changing "difficult" words to "easy" words; 2) objective: sentence simplification, making short sentences out of a long sentence; 3) objective, combined: using both short sentences and "easy" words; and 4) subjective: rewriting the pamphlet in the writer's own words. There were wide discrepancies in the readability scores of the five formulas *within* each version. The Flesch was the most disparate. Modifying particular linguistic components had differential effects on the readability estimates. The authors conclude that no one formula is better than another, but that researchers and teachers must be aware of the differential effects of certain linguistic variables on each of these formulas.

FITZGERALD, GISELA G. How many samples give a good readability estimate?—the Fry graph. *Journal of Reading*, February 1981, *24*, 404–410.

Discusses the issue of the number of passage samples necessary to estimate reliably the readability of printed materials. In one book the author selected 400 samples of 100 words and calculated Fry readabilities on eight sets of three samples. The average readabilities of each of these eight sets were quite disparate. Numerous other examples of such findings in both textbooks and workbooks are cited. The author then attempted to find the number of samples necessary to reach a .80 probability that the sample and total passage Fry readabilities are the same. It was found that in 11 of 36 different workbooks, the entire text had to be used, and because of the large standard error, the power level of .80 was still not attained. For none of the workbooks did even nine samples suffice.

VANDERPLAS, JAMES M., & VANDERPLAS, JEAN H. Some factors affecting legibility of printed materials for older adults. *Perceptual and Motor Skills*, June 1980, *50*, 923–932.

Analyzes reading speed and acceptance ratings as a function of type size, type style, line width, and line spacing in two experiments with samples of older adults. Experiment 1 compared two type styles, four fonts of the Roman style (Century, Schoolbook, Times Roman, and Bodoni) and three fonts of the Gothic style (Trade Gothic, Spartan, and Helvetica); and five type sizes (10, 12, 14, 16, and 18 points). Experiment 2 compared two type sizes (12 and 14 points), three lines widths (12, 18, and 24 picas) and three degrees of leading (2, 3, and 4 points leaded). There were 28 subjects in Experiment 1 and 27 in Experiment 2, all between 60 and 84 years old. Significant differences were found for different styles as well as different sizes of type. Subjects performed better (speed) and were more comfortable with Roman styles in sizes of 12 points or greater. However, style-size combinations combined with both line width and leading combinations to produce additional performance and judgmental variations.

HOLCOMB, CAROL ANN. The cloze procedure and older adults: effects of age and schooling. *Educational Gerontology*, July/September 1979, *4*, 279–293.

Utilizes the cloze procedure to investigate the effects of age and years of school on predicting the readability of printed patient education material for older adults. Subjects were 84 randomly selected participants in the Oregon State Elderly Nutrition Program. Their average CA was 74 and their average years of school was 10.55. In their own home, each person read one of three comparable cloze passages. The passages had similar readability levels and were on the topic of hypertension. Years of school correlated more significantly with cloze performance on the three passages (+.45 to +.70) than did age (−.03 to −.24).

ROBINSON, COLIN G. Cloze procedure: a review. *Educational Research*, February 1981, *23*, 128–133.

Reviews the research on cloze procedures for the purpose of presenting the most important findings. Topics discussed are the history of cloze, lexical and structural cloze deletions, the traditional methodology of cloze and some of the criticisms of cloze. The author concluded that cloze is a valid and reliable measure of readability as well as a valid and reliable indicator of reading ability. An annotated bibliography is provided.

SMITH, PHILIP T. In defence of conservatism in English orthography. *Visible Language*, 1981, *14*, 122–136.

Discusses the inherently valuable properties of English orthography, and states that these properties must be maintained should there be an attempt to reform English orthography. The author argues that spelling reforms should not be so greatly

altered to meet the needs of pupils learning to read that information significant to the fluent reader is lost. It is suggested that certain reforms might prove acceptable and other proposed spelling reforms are discussed. Relevant research is cited.

SNOWLING, MAGGIE, & FRITH, UTA. The role of sound, shape and orthographic cues in early reading. *British Journal of Psychology*, February 1981, *72*, 83–87.

Observes young pupils' ability to read text distorted so as to reduce sound, shape or orthographic cues. Subjects were presented with four different short stories all based on the *Neale Analysis of Reading* at the seven-year-old level of reading ability. Each story was printed in four different conditions: normal; phonologically similar, words written in a manner that when read aloud they sounded correct, but were misspelled; orthographically similar, words printed with one or two letters replaced by visually similar letters; multiple script, words were spelled correctly, but each consecutive letter of each word was printed in a different script. Each child received each of the four texts to read aloud, each one in a different condition. The dependent variable was reading time. They were aided if they could not identify a word in four seconds. Subjects were 21 English primary school pupils with an average CA of 7-2; 13 were good readers, who all passed the seven-year-old level on the *Neale Analysis of Reading Ability* and read 144 wpm. Their average PPVT IQ was 113. The eight poor readers ranged in reading ages from 6-7 to 7-2, read at an average of 41 wpm., and had an average IQ of 117. All pupils found distorted passages more difficult than normal text. Differences between good and poor readers were measured by logarithmic transformations of the extra reading time added by each of the three conditions. Good readers' reading rates were reduced more by orthographic distortions than by phonological or word shape distortions. Poorer readers were not differentially affected by the various distortions. The authors conclude that orthographic cues are used by readers with a reading age of seven years or more.

LOCKHEAD, G. R., & CRIST, W. B. Making letters distinctive. *Journal of Educational Psychology*, August 1980, *72*, 483–493.

Compares ability to match four letters printed in sans serif font with the same letters to which distinctive features were added. In Experiment 1, 23 children in early kindergarten were asked to sort a pack of 20 letters into four bins, each appropriately labeled. Time and errors were recorded and analyzed for two trials. The rate and accuracy were significantly higher for the dotted letters. Experiment 2, letters d, b, and q had different distinctive features added while p remained the same in the two sets of four. Another 27 kindergarten children sorted each set twice to determine the performance on each set. Both time and errors were significantly lower for the distinctive letters. Experiment 3 used numerals 5, 6, 2, and 9 printed normally and distinctively. The 27 kindergarten children, used match-to-sample, in October and February. The distinctive numerals were sorted significantly faster both months, but errors were negligible. Experiment 4 used 24 first-grade pupils, none of whom had seen the altered alphabets. Four sorting tasks, as in Experiment 2, required each child to sort the normal letters into bins labeled with the normal letter (N-N), the distinctive letters into bins marked with those letters (D-D) and two combinations, N-D and D-N. The D-D task was done significantly faster and with fewer errors than each of the other three. No significant differences in time were found among the other three tasks, but the D-N task had fewer errors. The letter p, which appeared the same on each set, varied markedly in errors among the four tasks. In Experiment 5, the 21 subjects were at Grade 2 and reading normally. Also, all recognized the four letters in both N and D fonts. They sorted the letters used previously in N-N, N-D, and D-N conditions. The D-N task was done significantly faster than the N-N, but did not differ from the N-D.

Errors were too few to study. Finally, Experiment 6 was done with 10 adults. The letter K was added to make a set of eight items, but b, d, and q appeared twice as often as p and k. Again the D font style produced shorter identification times. These consistent results across age levels revealed the advantage of distinctive fonts where letters in the stimulus sets had similar features.

SAKIEY, ELIZABETH; FRY, EDWARD; GOSS, ALBERT; & LOIGMAN, BARRY. A syllable frequency count. *Visible Language*, 1980, *14*, 137–150.

Describes the procedure and presents the tabled results of a combined computer-hand editing effort which generated 322 syllables which occurred five or more times in the 5,000 highest frequency English words and which comprise 52% of all the syllables in these 5,000 words. A second table presents, in frequency order, the 290 most common syllables based on a computerized count of their occurrences in 5,088,721 running words. The 290 syllables account for 72% of the 5,890,868 syllable tokens found in the 5,000 most common English words.

DISTEFANO, PHILIP, & VALENCIA, SHEILA. The effects of syntactic maturity on comprehension of graded reading passages. *The Journal of Educational Research*, May–June, 1980, *73*, 247–251.

Investigates the effects on reading comprehension of passages written at similar readability levels but varying in the syntactic complexity of the sentences in the passage. The study also examines the interaction of syntactic complexity and the reading difficulty level of the passage (independent, instructional or frustrational) for each subject. Subjexts were 65 seventh graders, the entire seventh grade class from an Eastern Colorado school. Cloze performance was the measure of reading comprehension employed in this study. The five reading passages were selected from the Spache *Diagnostic Reading Scales* and the Silvaroli *Classroom Reading Inventory*. All had Dale-Chall readabilities of grade 7-8. Syntactic complexity was calculated by averaging the weight of each word in a sentence and then averaging the weight of each sentence in the passage. The average syntactic complexity or average sentence weight of the five passages ranged from 2.1 to 2.7. The passage with the mean syntactic complexity closest to the average syntactic complexity of the five passages was used as the baseline passage. Cloze performance on this passage was used to determine if reading material at this readability level was at the students' frustrational, instructional or independent level. Each subject completed cloze tasks on two passages. For subjects performing at the instructional level on this readability level, the mean scores decreased significantly as the syntactic complexity of the passages increased. Their close scores ranged from 31% for the passage with a 2.7 sentence weight to 53% for the passage with a 2.1 sentence weight. Although pupils at the frustrational level scored more poorly than instructional level pupils, and pupils at the independent level scored higher, their scores did not vary with changes in syntactic complexity. The authors conclude that current readability formulas need to be reevaluated. They also point out that using equivalent passages for pre- and post-testing and matching instructional materials to reading level may be jeopardized because readability formulas fail to account for syntactic complexity.

SHIMRON, JOSEPH; & NAVON, DAVID. The distribution of visual information in the vertical dimension of Roman and Hebrew letters. *Visible Language*, 1980, *14*(1), 5–12.

Studies the interaction between the amount of mutilation of print and the region mutilated. Eight native English speakers and eight native Hebrew speakers were asked to read aloud four different areas: 1) very bottom, 2) lower half, 3) upper half, and 4) very top. Reading was tape recorded; the number of omissions and substitutions

plus the reading time were recorded. In English, removal of segments from the upper impaired reading more than did removal of segments from the lower half for time and errors; in Hebrew, the reverse was true. The wider the strip removed, the greater the effect on time and errors in both languages. However, the width factor had a greater effect on speed of reading in Hebrew than in English. The authors contend that the region and width interaction effect is not due just to features at the very top and very bottom.

HARTLEY, JAMES. Spatial cues in text. *Visible Language*, 1980, *14*(1), 62–79.

Compares in two experiments the accuracy and the time required when college students read passages printed in standard, segmented, or vertically spaced layouts and verified whether eight sentences were included in each of three passages. All passages for a particular subject were prepared in the same format. Each subject was tested individually. The subjects in the first experiment were 54 paid American undergraduate students. In the second experiment 36 British undergraduates read through the passages before verifying the sentences. In both experiments the subjects verified most of the sentences correctly. There were no siginficant sex differences and no significant differences in the time required to verify whether sentences were included in the different formats.

PERERA, KATHARINE. The assessment of linguistic difficulty in reading material. *Educational Review*, June 1980, *32*, 151–161.

Argues that classroom teachers should assess the linguistic difficulty (readability) of materials in order to provide pupils with materials at the appropriate readability levels. The author notes that thoughtful judgments by teachers may be superior to the application of readability formulas and provides argument, evidence, and examples to support the position that there are several major weaknesses to readability formulas, including the fact that short, or familiar words are not equally readable in all contexts and that some long sentences are easier to read than short ones. The author also presents a case for teachers being aware of grammatical constructions that may cause difficulty for their students.

VANDE KOPPLE, WILLIAM J. Readability of a rhetorically linked expository paragraph. *Perceptual and Motor Skills*, August 1980, *51*, 245–246.

Tests the Functional Sentence Perspectivists' rule for relating old and new information within the sentences of discourse. The rule-governed form contains a chain of old and new information; in the variant this chain is disrupted. In two trials involving subjective readability decision, a significant number of 272 high-school students selected the rule-governed paragraph as being more readable than the variant. Students were also asked to comment on why one was easier than another. It was reported that many students who selected the rhetorically linked paragraph as being easier wrote comments which suggested that they decided on the basis of the rhetorical linkage.

MILLER, JAMES R., & KINTSCH, WALTER. Readability and recall of short prose passages: a theoretical analysis. *Journal of Experimental Psychology: Human Learning and Memory*, July 1980, *6*, 335–353.

Studies readability as an interaction between reading material and the reader's processing capabilities rather than the characteristics of the text alone. The study extends the Kintsch and van Dijk prose processing model to 20 paragraphs selected from the *Reader's Digest*. The 600 college subjects were divided into five groups, each group reading a practice paragraph and four experimental tests. The subjects indicated when they finished reading by pressing a computer button which recorded the reading time; they then recalled in writing as much of each paragraph as they could. Each

protocol was analyzed by the processing model. The complicated analayses permitted recall predictions based upon the frequency of microstructure processing of the text's propositions and readability from the frequencies of events that indicated processing difficulties. Multiple regression predictions of readability (reading time per proposition recalled), reading time, and recall ranged from .8 to .9.

SCHULZ, RENATE A. Literature and readability: bridging the gap in foreign language reading. *The Modern Language Journal*, Spring 1981, *65*, 43–53.

Discusses the problems of college students learning a foreign language in the transition from learning to read to reading to learn in that language. The author posits that these students do not necessarily transfer all the sophisticated reading skills they use in their native language to their reading of foreign language literature. Thus it is important in selecting reading material for foreign language students to know what factors affect readability and how to measure the difficulty of foreign language tests for a particular group of students. The paper then reviews research on several methods of assessing readability: judgment, cloze procedure testing, and readability formulas. Research on predicting readability of foreign language texts with special emphasis on German texts is discussed and critiqued.

VARI-CARTIER, PATRICIA. Development and validation of a new instrument to assess the readability of Spanish prose. *The Modern Language Journal*, Summer 1981, *65*, 141–148.

Creates a new readability formula to estimate the difficulty level of Spanish text. The new formula is called the Fry Readability Adaptation for Spanish Evaluation (FRASE), and it is based upon the Fry Readability Graph. Instead of ascertaining specific grade levels, FRASE designates one of the four levels of second language study: beginning, intermediate, advanced intermediate and advanced. The syllable range of FRASE is 184 to 232, contrasted to the Fry, which is 108 to 182. The validity of the FRASE was evaluated by correlating FRASE scores with: teacher judgements, Spaulding formula ratings, cloze scores, and informal multiple choice tests. Eight textbooks representative of the four levels of Spanish language study were selected as the data basis. One 300–350 word sample was selected from each book. The range of rank order correlation coefficients between FRASE and the four other measures was .90 to .97. The study did not report the actual estimated level of difficulty of the materials, however. Thus it is not known if the actual level of difficulty estimated by FRASE is the same as the level estimated by the other estimates. Concludes that FRASE is a valid new estimate of Spanish language study texts.

RICHAUDEAU, FRANCOIS. Some French work on prose readability and syntax. *Journal of Reading*, March 1981, 24, 503–508.

Discusses French research in regards to four generally accepted English language principles that increase readability: 1) an increasing proportion of easy words, 2) a decrease in average sentence length, 3) an increased number of simple sentence constructions, 4) an increased number of items answered correctly on cloze passages. The author accepts and verifies the validity of the first two principles as they apply to French prose, but presents and discusses data that are not totally compatible with the last two principles.

MOE, ALDEN J. Analyzing text with computers. *Educational Technology*, July 1980, *20*, 29–31.

Reviews the literature on the use of computers in the analysis of written text. Four uses of computers for text analysis are reviewed: vocabulary analysis, word string analysis, sentence and syntactic analysis, and readability.

IV-20 Studies on the reading process

VERDAASDONK, HUGO. Some fallacies about the reading process. *Poetics*, February 1981, *10*, 91–107.

Argues that writers, critics and literacy theorists have always considered reading as a process of making direct and correct observations. The author attempts to demonstrate that this view is erroneous (naive) and fulfills only an ideological function. By supposing that a reader is always able to make a number of observations which are infallible, one must admit that these observations are self evident, that is, they need no other corroboration than the reader's mere claim that he has really perceived a given aspect of the text. He calls this supposition the "naive idea of perception" and maintains that it has been unconsciously accepted by literary theorists, critics, and writers. To demonstrate this, he gives examples from poetic treatises, contemporary works of theory of literature, and reception theory.

WALKER, CAROL H., & MEYER, BONNIE J. F. Integrating information from text: an evaluation of current theories. *Review of Educational Research*, Fall 1980, *50*, 421–437.

Examines the research on knowledge integration, with special emphasis on text comprehension. Two sections on the paper contrast knowledge integration theories of Bransford and Franks with the theories of Hayes-Roth and Throndyke. The third section discusses factors that affect the probability of integrating information from text. The last section presents conclusions and implications for educators.

DEBEAUGRANDE, ROBERT. Design criteria for process models of reading. *Reading Research Quarterly*, 1981, *16*(2), 261–315.

Argues that design principles often are left implicit in discussions of results of individual approaches to theoretical model design. Undertakes to clarify the issues by identifying and applying a set of 16 design criteria to ten alternative models of reading or understanding: those of Chomsky, the Clarks, Gibson, Kintsch, Meyer, Frederiksen, Schank, Rumelhart, Woods, and DeBeaugrande. Concludes with recommendations for future research directions.

STANOVICH, KEITH E. Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly*, 1980, *16*(1), 32–71.

Examines different models of reading, especially top-down and bottom-up models, in an effort to explain individual differences in reading fluency at different age levels. Since neither of the above models accurately explained the research, interactive and compensatory models were probed, using data from good and poor readers, age and grade changes, and finally, fluency of adult reading. Since good readers have been shown to have superior strategies for comprehending and remembering large units of text, it was posited that they recognize words automatically, whether by one means or another, and that recognition is accomplished unconsciously so that attention can be directed at integrative recognition processes.

SHOBEN, EDWARD J. Theories of semantic memory: approaches to knowledge and sentence comprehension. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 309–330.

Examines the requirements of an explicit model of sentence comprehension that would explain how meaning is extracted from a surface representation. Focuses

specifically on the requirements of comprehending simple categorical statements such as "Robins are birds." Included in the research reviewed is a discussion of the relationship of semantic memory to cognitive psychology.

MORGAN, JERRY L., & SELLNER, MANFRED B. Discourse and linguistic theory. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 165–200.

Reviews selected linguistic research on the properties of text that are important in the reading process and how those properties are characterized. Discusses several linguistic theories of discourse in order to examine the question of how much of discourse competence is linguistic competence (use of language) and how much is the manifestation of mental systems more general than linguistic competence.

COLLINS, ALLAN; BROWN, JOHN SEELY; & LARKIN, KATHY M. Inference in text understanding. In Rand J. Spiro, Bertram C. Bruce, & William F. Brewer (Eds.) *Theoretical Issues in Reading Comprehension*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980, 385–407.

Argues that when people understand a text, they seem to create a complex scenario or model within which the events described might plausibly occur. In order to demonstrate how people construct and revise such models, the authors had four subjects (undescribed) listen to five short but difficult-to-understand texts. They then recorded how the subjects made sense (constructed a model) of the text. After discussing the theory, selected protocols from two of the subjects are presented and models of their method of comprehending the text are given. Also discusses and graphically demonstrates how subjects revised and evaluated their models of the text. Implications for instruction in reading comprehension are given.

DOWNING, JOHN. Research revisited: Jack Holmes' substrata-factor theory of reading. *Reading Psychology*, Spring 1981, *2*(2), 108–116.

Reviews the statistical, neurological, and psychological models in the substrata-factor theory of reading. In particular, attention is paid to three attributes which hold importance for theory and research in the psychology of reading: 1) reading as reasoning, 2) the modular nature of subabilities, and 3) conceptual reasoning in reading acquisition.

STANOVICH, KEITH E., & WEST, RICHARD F. The effect of sentence context on ongoing word recognition: tests of a two-process theory. *Journal of Experimental Psychology: Human Perception and Performance*, June 1981, *7*, 658–672.

Tests a two process theory of expectancy which accounts for the effect of sentence context on word recognition. The two processes of the theory are: the automatic spreading-activation process (SAP), where context facilitates the automatic recognition of words without activating attentional capacity and conscious-attention mechanism (CAM), in which context facilitates word recognition but requires attentional capacity and is a slow process. SAP is much faster than CAM. To test this theory, three experiments were conducted. The subjects of the three experiments were 18, 48, and 32 undergraduate students. In Experiment 1, subjects read tachistoscopically presented sentences ending in "the" plus a noun in which the noun was deleted. After reading the sentence, a word appeared: either the word that was deleted (congruous), an incongruous word, or three "the's." In Experiments 2 and 3, subjects read 96 pairs of tachistoscopically presented sentences ending in "the" plus a noun. The sentences of

each pair were the same except the final noun of one set was easy and the noun of the other set was difficult. In Experiment 2, subjects practiced reading half the easy and half the difficult words before reading sentences. In Experiment 3, the response-stimuli interval was manipulated and there was no practice. Reaction time (RT) to reading the word that appeared was the dependent variable. The congruous condition in Experiment 1 facilitated, but the incongruous condition did not inhibit RT. In Experiments 2 and 3, difficult, but less predictable, words displayed longer context effects than easier more predictable words. The theory accounted for these findings.

NGANDU, KATHLEEN F., & PEARSON, BETSY. Sixth-grade students' recreational reading strategies. *Illinois Reading Council Journal*, October 1980, *8*, 11–14.

Examines the responses of good, average, and poor sixth graders (N=91) to two interview questions: (1) Do you ever come across word or words you don't know? and (2) What do you usually do to help you understand the word or words you don't know? Meeting unknown words was reported by all ability level readers. Priorities among strategies employed differed by reader ability. Good readers strategies in order of use were: dictionary, context clues, ask someone, phonics, skip it, and structural analysis. Poor readers' hierarchy of strategies was: phonics, ask someone, skip it, context clues, dictionary, and substitute known word. All strategies tested had been included in the school curriculum of the subjects.

BAKER, LINDA. Comprehension monitoring: identifying and coping with text confusions. *Journal of Reading Behavior*, Winter 1979, *11*, 365–374.

Explores comprehension monitoring by having 22 university undergraduates read six passages, describe and evaluate questions dealing with the target paragraph, and detect confusions introduced to the material: i.e., inconsistent information, unclear reference and inappropriate logical connectives. Only 38% of confusions were detected. However, subjects detected significantly more main point confusions than detailed confusions ($p < .001$). Inappropriate connectives were detected less frequently than inconsistencies and vague references. Retrospective reports revealed that subjects frequently used repair strategies to resolve the potential confusions; i.e., subjects recognized the existence of a problem but either decided ti was trivial or would make an inference or draw upon prior knowledge to make the text more comprehensible.

CORCORAN, W. T. Indoctrination in literature: some Australian evidence. *English in Australia*, September 1980, No. 53, 50–59.

Presenta a partial report of an Australian cross-sectional study of response to literature. Subjects consisted of 120 teacher-nominated students, evenly distributed across sex, ability, and grade levels eight, ten, and twelve. Subjects read a short story and a poem in class and wrote delayed free responses for each piece. Each response was categorized into subcategories of five major classifications: Engagement-Involvement, Perception, Interpretation, Evaluation, or Miscellaneous. Australian responses for grade eight and grade twelve average or superior ability subjects are compared with U.S. subjects from another report. Perception responses were most frequent for both populations. Percentages of mean response for both populations by category and subcategory are presented in tabular form and discussed.

BADER, LOIS A.; PEARCE, DANIEL L.; & THOMPSON, DAVID R. Effect of discourse on processing of left- and right-embedded syntactic structures. *Perceptual and Motor Skills*, June 1980 (Part 1), *50*, 883–889.

Records and analyzes eye movements of 30 university graduate students reading four pairs of sentences linguistically constructed to present left-embedded and right-embedded structures. The target sentence treatment was set in conditions of three unrelated sentences or in connected short paragraph discourse. Visual processing was recorded with a *Biometrics Reading Eye II* camera. Specific findings for the dependent

variables of duration of gaze, duration of forward fixation, duration of regression, frequency of fixations and regressions, and total movements are presented in tabular form with indications of t test significance. In general, although visual processing was influenced by syntactic structures, with left-embedded sentences more difficult than right-embedded, contextually situated target sentences were processed significantly more readily than those in unrelated sentences.

McConkie, George W. What the study of eye movement reveals about reading. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *3*, 71–87.

Cites recent research in eye movements to demonstrate that the eyes reflect aspects of the thought process. The author posits eye movement research as one approach to the study of reading.

Hills, George L. C. Through a glass darkly: a naturalistic study of students' understanding of mathematical word problems. *Instructional Science*, April 1981, *10*, 67–93.

Employs strategies associated with case study and structured and unstructured interview with one grade seven female subject as a means of identifying the processes by which she attempts to make sense of word problems in her seventh grade mathematics text. Summarizes the subject's mathematics instructional background, and compares strategies recommended by the text with those actually used by the pupil.

Perfetti, Charles A., & Lesgold, Alan M. Coding and comprehension in skilled reading and implications for reading instruction. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *1*, 57–84.

Advances a framework of reading and research with reference to the connection between verbal coding and comprehension. As a backdrop, five basic assumptions were delineated. First, skilled reading can be partly understood as a set of interrelated component processes. Second, the components of the reading process are not necessarily functionally independent. Third, the component processes are isolatable in principle, although interrelated in practice. Fourth, within the constraints of Assumption One, reading is highly flexible. Fifth, the relationship between skilled reading and beginning reading instruction is not straightforward. Evidence was cited that general verbal coding facility was substantially correlated with reading achievement; although cause or effect was not known, the probability was theorized that cause runs in both directions to and from coding and comprehension.

Johns, Jerry L. First graders' concepts about print. *Reading Research Quarterly*, 1980, *15*(4), 529–548.

Investigates the implications of the relationship between cognitive clarity and reading achievement by measuring the concepts about print held by 60 first grade children classified into "above average," "average," and "below average readers" as statistically differentiated by primary forms of the *Metropolitan Reading Survey Test* or *Gates-MacGinitie Reading Test* and by teacher's current basal reader placement. Concept knowledge was assessed by means of the Sand's *Concepts about Print Test*. All subjects achieved perfect scores in book orientation. Above average readers were significantly superior to below average readers in print direction ($p < .05$). Average and above average readers were significantly superior to below average readers on letter-word concepts, and significant differences occurred between means for the three ability groupings on advanced print concepts ($p < .05$). No significant differences obtained between sex of subjects.

HEISS, WARREN E. I know what the answer is. What is your question? *The Reading Instruction Journal*, Winter 1981, *24*(2), 13–23.

Speculates on holistic approaches for understanding learning in children and describes gestalt principles and inductive teaching as models. Research is cited to support the speculations about the nature of holistic striving on the part of individuals from infancy through adulthood.

DOCTOR, ESTELLE ANN, & COLTHEART, MAX. Children's use of phonological encoding when reading for meaning. *Memory & Cognition*, May 1980, *8*, 195–209.

Investigates the role of phonological recoding in children's reading by means of a task requiring comprehension of sentence meaning. In Experiment 1 there were 60 boys and 60 girls from two London, England, primary schools. There were equal numbers of boys and girls in each of five age groups: 6-2, 7-3, 8-4, 9-0 and 10-6. No one had a reading problem. Children read 12 (of 16) blocks of sentences, each block containing 16 sentences. Eight of the sentences were meaningful and eight were meaningless. There were two types of meaningful sentences (plus four filler sentences): two containing no homophones (The sky is big) and two containing homophones (The sky is blue). There were four types of meaningless sentences: all-word sentences that sound correct (e.g., The sky is blew), all word sentences that sound incorrect (e.g., The sky is no), sentences containing non-words that sound correct (e.g., The sky is bloo) and sentences containing non-words that sound incorrect (e.g., The sky is noe). The task was to decide whether a sequence of printed letter strings was a meaningful sentence or not. Meaningless sentences that are meaningful when phonologically recoded produced more incorrect responses than did meaningless sentences that remain meaningless when phonologically recoded. The difference in error rates between the two sentence types diminished as a function of age. A series of three other control experiments showed that these results were not due to visual similarity effects, nor to imperfect ability to spell homophones. It was concluded that very young readers rely extensively on phonological recoding when reading for meaning; as they grow older, reliance on visual encoding becomes progressively more important.

V. The teaching of reading

V-1 Comparative studies

POWER, COLIN. Reactions to a report on reading standards. *Australian Journal of Reading*, June 1979, *2*, 92–95.

Looks into a 1978 report on the reading standards of Queensland, Australia, grade five pupils as evidence to refute claims that overall reading standards have fallen. The reviewed research summarized the results of eight surveys done in Queensland since 1933. Comparisons between performances in the period 1946 to 1965 and 1977 were made. An increase in the standard of reading from 1946 to 1971 was noted. In 1977, results were slightly lower than in 1971, but still higher than any other from 1946 onwards. The evidence indicated that 1970's grade five pupils were not only attaining a higher standard of reading than pupils from earlier eras, but that they were also doing so at a younger age.

NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION. Compensatory education working, new reading assessment shows. *Education USA*, May 4, 1981, *23*, 281, 288.

Highlights the latest reading results of the *National Assessment of Educational Progress* program showing that student performance is better at age nine, about the same at age thirteen, and slightly worse at age seventeen than student performance of a decade ago.

VANCE, DOUG. Research update: literacy - hoax or hope? *Wisconsin State Reading Association Journal*, October 1980, *25*, 24–27.

Includes selected studies for review to compare reading performances of students in the past with those of the present and to ascertain trends in reading achievement. The author concludes with a call for more research into the topic, especially conducted independently of the testing industry.

NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION. Boston students latest to raise reading scores. *Education USA*, June 29, 1981, *23*, 340.

Gives the trend of rising reading scores in Boston, indicating that the current test results were the highest in eight years. Of eleven grades tested, seven showed improvement, and only the third grade declined. Fifth and eighth graders did the best.

NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION. New York test scores exceed national average. *Education USA*, June 8, 1981, *23*, 322.

Focuses on current test scores that are up in New York City, surpassing the national norm for reading. The scores represented an increase of 4% over the 1980 scores and more than 10% above the 1979 scores.

NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION. Scores up because of hard work, big city school administrators say. *Education USA*, July 6, 1981, *23*, 345, 350.

Cites reports of recent student gains on test scores, especially students in urban schools.

LEWY, ARIEH. Student achievement in Israel of immigrants from developed and developing countries. *American Educational Research Journal*, Spring 1981, *18*, 113–118.

Examines, within the framework of a large-scale international survey, the achievement level of children whose parents immigrated to Israel from developing countries and those whose parents came from developed countries. The results indicated that the average reading comprehension score of children whose parents immigrated from developing countries was above the range of the national averages of the developing countries.

COOLAHAN, JOHN. Three eras of English reading in Irish national schools. In Vincent Greaney (Ed.) *Studies in Reading*. Dublin: The Educational Co., 1977, 12–26.

Studies the teaching of English reading in Irish national scools over the past century. Three major eras are focused on: the Payment by Results era (1872–1899), the period of the child-centered Revised Program (1900–1922), and the early decades of curricular policy within the Irish Free State. During the first of these eras, the stress was on mechanical literacy; the second era sought to promote enjoyment and pleasure in reading and materials became more attractive and varied; during the third era, there was a reduction of the status of English in the schools and English reading was taught through a heavy reliance on textbooks with a nationalistic emphasis.

V-2 Status of reading instruction

JONGSMA, EUGENE A. *Cloze instruction research: a second look*. Newark: International Reading Association, 1980.

Critiques and synthesizes the literature pertaining to the use of the cloze procedure as an instructional technique. Identifies weaknesses in the research literature and proposes suggestions for needed research. The research is organized into eight categories. Studies reviewed in the first edition of this monograph are not re-reviewed, thus the focus is on 36 studies executed since 1971. Of these, 26 were dissertations. A summary of the studies is presented in tabular form in the appendix and includes a description of the population, the goals of instruction, length of treatment, criterion measure, and the basic finding.

AINSLIE, JEAN. Research into reading—generating some practical teaching strategies. *Reading (UKRA)*, December 1980, *14*, 25–30.

Considers several research studies, and extracts from them strategies and techniques useful for the classroom. The author ends on a note that, when read critically and insightfully, research can aid teachers with their teaching techniques.

FEDS, MARYANN. What to do when they don't understand what they read—research-based strategies for teaching reading comprehension. *The Reading Teacher*, February 1981, *34*, 565–571.

Bases eight suggested strategies for improving comprehension on research findings. For each strategy listed, the author cites supporting information. Particular stress is placed on the importance of the eighth strategy, organizing the reading program around meaningful activities.

GAMBRELL, LINDA B. Think-time: implications for reading instruction. *The Reading Teacher*, November 1980, *34*, 143–146.

Argues for teachers to allow children to have think-time before a question is repeated, another question asked, or another pupil called upon. The research supporting the need for think-time and its effect on children's responses is documented. The need for think-time following a response to a teacher's inquiry is also documented.

WITTE, PAULINE L., & OTTO, WAYNE. Reading instruction at the postelementary level: review and comments. *Journal of Educational Research*, January/February 1981, *74*, 148–158.

Reviews professional publications of postelementary content area educators and reading educators in an effort to determine whether admonitions to incorporate reading instruction in the content areas have been effective. The review begins with programs and practices in special reading classes and then views developmental teaching in the content areas. Research is cited along with other publications.

JOHNS, JERRY L. Do teachers provide reading instruction? *Reading Psychology*, November 1980, *2*, 43–48.

Examines the implications of a recent study on reading comprehension and delineates several major findings that were relevant to classroom instruction.

V-3 Early reading

TEALE, WILLIAM H. (Compiler). *Early Reading: An Annotated Bibliography*. Newark, Delaware: International Reading Association, 1980.

Presents an annotated bibliography on early reading with a focus on learning to read at home and on the issue of reading in kindergarten. The first section of the

bibliography cites studies involving in-depth research on the various aspects of early readers and early reading. Citations are divided into five additional categories: Theoretical Issues in Early Reading, Pedagogical Issues in Early Reading, Empirical Issues in Early Reading, Reviews of Early Reading, and Bibliographies of Early Reading.

SAMPSON, MICHAEL R., & BRIGGS, L. D. What does research say about beginning reading? *Reading Horizons*, Winter 1981, *21*, 114–118.

Reviews the research literature on the optimum time for beginning reading instruction. The authors conclude that the majority of studies support the idea of learning to read before school because the lead in achievement is maintained through the first two years of school and even beyond. It is important for the teacher to base the curriculum on the reading abilities of the individual child and his level of maturation.

KINCAID, MICHAEL S.; WEISBERG, PAUL; & SIMS, JR., EDWARD V. Using tokens as instructional stimuli to teach academic skills to children during a token-exchange period. *Perceptual and Motor Skills*, February 1981, *52*, 223–233.

Uses tokens as instructional materials in two separate studies with preschool and kindergarten children. In both experiments, children were given a number of tokens initially and allowed an opportunity to purchase various items by recognition of the designated information on each token. In the first experiment, two preschool age black girls were taught 12 colors through the use of pairs of colored plastic sticks. The recognition ratio for trained to untrained colors was 12:0 by the end of the sixth probe session and remained so at post-check times of one and three weeks. In the second experiment, six kindergarten children attended a token-exchange area for instruction in letter-sound identification. Pre-training recognition scores improved after recognition training. Recognition of trained sounds was greater than untrained sounds.

STINE, SHARON. Beginning reading—naturally! In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Fourth Yearbook*, 1980, 144–155.

Summarizes some of the noteworthy behavior observed in a previous study in which naturalistic observations of children's spontaneous behavior to beginning reading in an open educational environment were recorded. The subjects were nine boys and nine girls enrolled in a University preschool laboratory. How the observations were made and recorded was not reported. It was observed that children fluctuated greatly from week to week in their spontaneous involvement with reading activities and that there were no noticeable differences in the reading activity levels of boys and girls. A discussion of the children's involvement in writing was presented, accompanied by several examples of writing.

V-4 Reading readiness

DUNN, NANCY E. Children's achievement at school-entry age as a function of mothers' and fathers' teaching sets. *The Elementary School Journal*, March 1981, *81*, 245–253.

Explores what parental teaching practices and beliefs were related to their children's school achievement at entry age. Subjects were 40 children and their mothers and fathers, all white. The children had attended the same public nursery school, located in a suburban eastern community. Data were collected from three sources: 1) ratings and test scores obtained by nursery school teachers, 2) parent interviews, and 3) diary entries as recorded by mothers. Teachers rated children on 13 items assessing school-relevant skills and asministered two standardized tests, one of which was the *Peabody Picture Vocabulary Test*. Correlation coefficients of the diary and teaching-

role belief measures with children's scores showed that reading time with parents was not significantly related with any of the children's scores. Also time spent didactically teaching verbal skills was not associated to scores on the verbal skills checklist. But parents' beliefs regarding their teaching roles were predictors of children's scores. A father's teaching set was related to specific problem-solving skills in children, and a mother's specific teaching set was related to concrete verbal and math skills.

IZUMOJI, TAKESHI. The use of picture books for education of children in kindergarten and nursery school in Japan. In Dorothy S. Strickland (Ed.) *The role of literature in reading instruction, cross-cultural views*. Newark, Delaware: International Reading Association, 1981, 25–32.

Includes a brief report of a survey on the attitudes of 274 mothers toward picture books. The study was done in six Tokyo kindergartens. The mothers were asked their reasons for giving picture books to their children. The three most common reasons cited were: 1) they want their children to find the joy of reading (81%); 2) they want their children to be more creative and imaginative (66%); and 3) they want their children to be knowledgeable (52%). It was also found that 80% of the children have picture books read to them at home by their mothers, and 12% are read to often.

OSTERLINE, STEVEN J. Preschool impact on children: its sustaining effects into kindergarten. *Educational Research Quarterly*, Winter 1980–81, *5*(4), 21–30.

Evaluates the sustaining effects of preschool programs. Pupils who had previously attended preschool were compared with those who had no previous preschool experience in kindergarten. The preschool programs considered were the California State Preschool and the Children's Center Preschool. A third group with no previous preschool experience was used for comparison. Five dependent variables were examined: reading (or reading readiness) and mathematics achievement, academic potential, social and emotional maturity, conformity to successful pupil behaviors, and adjustment to academic and social setting in the classroom. When factor analyzed, most of the variance on measures of scores were attributable to State Preschool program participants. Generally there were few differences between Children Center program participants and comparison group children. Post hoc analyses revealed varied interactions.

YAWKEY, THOMAS DANIELS. Effects of social relationships curricula and sex differences on reading and imaginativeness in young children. *Alberta Journal of Educational Research*, September 1980, *26*, 159–168.

Investigates the effects of social relations curricula and sex differences on reading readiness and imaginativeness in five-year-old children. Subjects were 96 middle-class children in four intact suburban classrooms, 12 boys and 12 girls in each class. Two classes each were randomly assigned to experimental and control groups. Pre- and posttests included the *Gates-MacGinitie Reading Readiness Skills Test* and the *Singer Imaginativeness Inventory*. The *Peabody Picture Vocabulary test* was also administered as a pretest. The experimental treatment was 15 minutes a day, five days a week for seven months, and consisted of teacher directed social relations curricula through role playing. Children in the control group participated in arts and craft activities. There was no significant pretest difference between experimental and control groups on IQ. Analyses of covariance results of posttest performance indicated that the experimental groups scored significantly higher on the Gates-MacGinitie and the Singer tests. Girls outscored boys on both.

LEWKOWICZ, NANCY K. Phonemic awareness training: what to teach and how to teach it. *Journal of Educational Psychology*, October 1980, *72*, 686–700.

Categories according to probably usefulness in the early stages of reading readiness instructions the tasks that require the ability to perceive a spoken word as a sequence of individual sounds. Ten phonemic awareness tasks were identified from

research or classroom usage. The tasks were limited to ones that did not involve the use of printed letters or printed words. The tasks of blending and oral phonemic segmentation were singled out as most closely associated with reading. The potential of other phonemic awareness tasks for aiding mastery of blending and segmentation was evaluated. The article also surveyed current knowledge about how to teach segmentation and blending and pointed out areas where further research in teaching methods is needed.

PAGE, ELLIS B., & GRANDON, GARY M. Massive intervention and child intelligence: the Milwaukee project in critical perspective. *Journal of Special Education*, Summer 1981, *15*(2), 239–256.

Reviews and critiques the Milwaukee Project in which it was purported that a massive five-six year intervention into the home and education of retarded slum children raised their IQs by two standard deviations. The Milwaukee Project is critiqued from four points of view: the scientific quality of the publications in which the project is reported; methodological issues; the description of the program implemented by the project; and the quality of the testing of later performance.

V-5 Teaching reading—primary grades

CLAY, MARIE M. Theoretical research and instructional change: a case study. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *2*, 149–171.

Explains what happened when results of a research program in beginning reading were translated into classroom practice through the process of publication and in-service education. Treated separately was an evolving theory of reading development from a long-term project in New Zealand using case study of information-processing strategies among children in the act of learning to read. Described were the implications of theory and research for possible change and ways to effect instructional change.

MALMQUIST, EVE. Beginning reading in Sweden. In Lloyd O. Ollila (Ed.) *Beginning Reading Instruction in Different Countries*. Newark: International Reading Association, 1981, 1–15.

Describes the rationale, methods and materials of teaching beginnig reading in Sweden. Several studies of factors related to success in beginning reading are reviewed also.

OLLILA, LLOYD O. & NURSS, JOANNE R. Beginning reading in North America. In Lloyd O. Ollila (Ed.) *Beginning Reading Instruction in Different Countries*. Newark: International Reading Association, 1981, 26–53.

Describes beginning reading instruction in the United States and Canada. Topics discussed are: a historical perspective of beginning reading, 1880–1910, 1910–1925, 1925–1940, 1940–1960; the age at which beginning reading instruction is given; the role of parents; methods and materials; instructional organization; theoretical background; and evaluation studies.

SAKAMOTO, TAKAHIKO. Beginning reading in Japan. In Lloyd O. Ollila (ED.) *Beginning Reading Instruction in Different Countries*. Newark: International Reading Association, 1981, 16–25.

Describes beginning reading instruction in Japan. Topics included are: reading of Hiragana, reading of Kanji, publications for preschool children, and research on beginning reading.

PELAUM, SUSANNA W.; WALBERG, HERBERT J.; KAREGIANES, MYRA L.; & RASHER SUE P. Reading instruction: a quantitative analysis. *Educational Researcher*, July/August 1980, 9(7), 12–18.

Utilizes a meta-analysis technique in synthesizing the findings from 97 instructional methods studies in reading. The studies were randomly chosen from 665 instructional methods studies summarized in the 13 annual summaries appearing in the *Reading Research Quarterly* for the years 1965 through 1977–78 inclusive. The sample was about 15% of the population of instructional method studies and included 341 different comparisons of experimental versus control treatments. Two sets of analyses were carried out to estimate the consistency and magnitude of the experimental methods of teaching reading. Among the results, 73 of the 97 studies showed that the experimental groups were superior to the control groups. The finding of experimental superiority appeared to be applicable across pupil and teacher variables, different research methods, design characteristics, and outcome types. Of the 31 methods compared, the sound-symbol blending method had a mean effect size that was significantly higher than the mean for other experimental treatments. Clearly superior, specific methods for teaching older readers and for remediating disabled readers were not found.

CHALL, JEANNE S. The great debate: ten years later, with a modest proposal for reading stages. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *1*, 29–55.

Describes a scheme of developmental stages of reading and suggests the values of each reading stage for research, instruction, and evaluation as well as for understanding the reading process and how reading develops. Five stages were delineated from Initial Reading or Decoding Stage to Stage five, a World View—College, Ages 18 and above. Generated were some hypotheses that were formulated in part from the work of Piaget, particularly on not only his stages of cognitive development but also the processes of assimilation and accommodation. Included in the first part of the paper was a discussion on the effect of *Learning to Read: The Great Debate* on current practices in the teaching of reading. It was maintained that ten years later no new evidence through research has disconfirmed the benefits of code-emphasis as compared with the meaning emphasis in beginning reading.

FULWILER, GWEN, & GROFF, PATRICK. The effectiveness of intensive phonics. *Reading Horizons*, Fall 1980, *21*, 50–54.

Compares the effects of an intensive phonics program with those of a less intensive program on first-grade reading achievement. The subjects were 73 children who were taught in basic readers that stressed phonics, and 74 children who were taught in a developmental program with less stress on phonics in beginning reading. At the end of the school year, both groups were administered a standardized reading test (not identified) as the criterion measure. Differences in mean scores favored the intensive phonics group in vocabulary, word analysis, and comprehension. All differences were statistically significant.

BAKER, GRAEME. Learning to read: children's responses to the 'look and say' method. *Educational Review*, June 1980, *32*, 133–150.

Transcribes approximately 10 hours of reading instruction to 30 first graders who were being taught to read by a direct sight approach in an Australian classroom. The recordings were made in a regular school setting within the tenth week of the first school year. Transcriptions were made when the teacher worked with the children grouped as a whole on the mat in front of her. An analysis of children's responses disclosed that rote memorization of reader vocabulary was not judged as a simple task.

Most of word errors appeared to occur during review sessions that followed immediately the introduction of new words. In a comparison of the reading vocabulary with vocabulary used by the children in their sentences, the children's vocabulary seldom included words they encountered in their reading lessons.

GAMBRELL, LINDA B., & JARRELL, MARY E. Summer reading: description and evaluation of a program for children and parents. *Reading World*, October 1980, *20*, 1–9.

Describes and evaluates a summer reading program designed for low socioeconomic pupils. The program involved 230 Title I children in grades K–3 and 78 parents. The program included in-service training of teachers and aides as well as weekly home visits by the teacher or aide. In evaluating the program, structured parent interviews were used and the *Heathington Attitude Scale* was adapted and administered to pupils. Of the 230 children, 194 completed the attitude survey. Results of the attitude survey indicated that children were enthusiastic about the program. In replying to the structured interview, 59% of parents said that the thing children liked most about the program was getting the books and 29% said that children most liked having the teacher or aide visit the home. The most helpful aspects of the program in parents' views were having the books available in the home (52%) and the individual help and attention their children received (19%). As a result of the program, 38% of parents reported that they read with their children more often. Most parents (85%) felt that their children would want to participate in the program again.

CROWELL, DORIS C., & KLEIN, THOMAS W. Preventing summer loss of reading skills among primary children. *The Reading Teacher*, February 1981, *34*, 561–564.

Designs a study to see whether encouraging primary school children to read during the summer would aid them in maintaining reading skills over the vacation period. Fifty lower income Hawaiian children, 25 at grade one and 25 at grade two, were ranked according to criterion-referenced reading scores and teacher judgment as to reading ability. Children were assigned alternately to a treatment or comparison group. Each child in the treatment group was mailed one book each week for 10 weeks over the summer. The books were sorted for difficulty level and children were sent books appropriate to their reading levels. Alternate forms of the *Gates-MacGinitie Reading Tests* were administered in May and September. After correction for pretest differences, the results showed significant gains in the vocabulary score at grade one for the treatment group as opposed to the controls. At grade two, vocabulary score differences favored the treatment group but did not reach significance. No significant differences were found for the comprehension scores between the two groups. On criterion-referenced vocabulary tests, losses were shown for all groups but the first grade treatment group showed a significantly smaller loss than did its comparison group.

MOORE, PHILLIP J. Children's thinking about reading. *Australian Journal of Reading*, March 1980, *4*, 23–32.

Reviews selected research concerned with children's understanding of the reading process at preschool, beginning reader, and proficient reader stage. Implications of these studies for instruction are considered.

JOHNS, JERRY L. Beginning reading: fusing research and instruction. *Australian Journal of Reading*, August 1979, *2*, 197–204.

Reviews the literature on children's notions about reading and reanalyzes data of an earlier study by the author. The sample for reanalysis was composed of 1122 children in grades one through six. These pupils were asked "What is reading?" A

total of 64% of the subjects viewed reading in terms of classroom procedures and educational values such as reading aloud, doing worksheets, reading to the teacher, and switching to a different class for reading; 25% believed that reading was sounding-out words or decoding; and 11% described reading with responses that focused on understanding or meaning.

CHAING, BERTTRAM. Learning and transfer effects of three different training approaches with first-grade students. *Reading Improvement*, Winter 1980, *17*, 237-242.

Studies the relative effectiveness of three methods to teach first graders three comparable sets of word lists containing 10 words each. Sixty children were randomly assigned to treatment groups. The methods included 1) the initial consonant and medial vowel presented as a cluster to be blended, 2) the medial vowel and consonant presented as a cluster to be blended, or 3) practice on phonetically regular words unsegmented. Additionally, the study looked at whether CVC words were more or less transferable than CVCE words. Children were trained in each method until attaining a mastery level of 80%. They were then given the transfer test. Analysis of variance and post-hoc comparisons revealed that subjects in the segmented method groups needed fewer trials to reach initial learning criterion and achieved more transfer than those within the unsegmented method groups. The two segmented method groups, however, achieved essentially the same amount of transfer. In addition, no difference between the two types of word patterns was revealed.

HANSEN, JANE. An inferential comprehension strategy for use with primary grade children. *The Reading Teacher*, March 1981, *34*, 665-669.

Undertakes an experiment in a classroom to demonstrate the effectiveness of an inferential comprehension strategy on the reading achievement of a second-grade class. Members of the class were assigned to either a control or experimental treatment group. The first 10 stories in their board was taught to each group of eight pupils. Four days were spent on each story. The experimentals received special instruction on how their prior personal knowledge could be used to draw inferences or to make predictions about each story. Controls spent comparable time receiving story introductions as suggested by teacher's guide. Posttest comparison of mean scores on the Comprehension subtest of the *Stanford Achievement Test* favored the experimentals. In addition, an analysis of responses to worksheet questions favored the experimental group. A specially developed test based on two stories read at the end of the study was administered also. The 10 literal and 10 inferential questions were administered orally to each child. Scores on this test did not differ significantly for the two groups.

GROFF, PATRICK. The controversy over reading vocabulary. *Wisconsin State Reading Association Journal*, January 1981, *25*, 6-7.

Concludes on the basis of a review of the research that direct instruction is superior to incidental instruction in developing children's reading vocabularies. It is also noted that a sentence context method brings about the best results.

REIFMAN, BETTY; PASCARELLA, ERNEST T.; & LARSON, ANNA. Effects of word-bank instruction on sight word acquisition: an experimental note. *The Journal of Educational Research*, January/February 1981, *74*, 175-178.

Investigates the effects of the addition of a word-bank instructional component on the sight vocabulary acquisition of 19 grade one pupils. Ten children were assigned to the experimental condition (word-bank) and nine to the control. All received 12 weeks of reading instruction in which a language experience approach (LEA) was used. Word-bank instruction consisted of four procedures: 1) reviewing the

LEA story and underlining words the child could read, 2) repeating this process on the second day, 3) writing the twice underlined words on a card (the word-bank) and 4) having the teacher use this word-bank for vocabulary review and the development of word analysis skills. These four activities were done individually in 10-minute sessions three times a week and took a total of six hours. From the Dolch 220, 178 words were selected and administered as a pre-test and as the post-test dependent variable. Covarying on number of pre-test sight vocabulary words read, the word-bank group read significantly more words than the control group.

NEUMAN, SUSAN B. Effect of teaching auditory perceptual skills on reading achievement in first grade. *The Reading Teacher*, January 1981, *34*, 422–426.

Uses an author-constructed auditory perceptual training program and assesses its effects on reading achievement. The subjects were 256 pupils from 10 first-grade classes which were randomly assigned to control and experimental groups. The program included 76 lessons and worksheets divided into four instructional units: auditory attention, discrimination, blending, and memory. Both experimentals and controls were taught in the same basal reading program. Experimental lessons were given in groups of five to eight children for 10 minutes, three times weekly for seven months. The controls were given comparable time for various individual activities. Mean comparisons of pre- and posttest scores on the *Metropolitan Achievement Tests* favored the control group in word analysis, word knowledge, and reading, but the differences were not significant.

FREDERIKSEN, CARL H. Discourse comprehension and early reading. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *1*, 155–186.

Examines early reading from a viewpoint of comprehension theory to explain how early reading instruction can enable a child who already is proficient in understanding oral language to transfer this ability in learning to read. Current theories and knowledge about discourse comprehension were presented to show how they could be related to goals for beginning reading instruction. It was argued that the primary objectives of beginning reading instruction should be to help children develop an ability to comprehend written discourse in a manner comparable to their comprehension of oral discourse. Also decoding objectives should be clearly subordinated to comprehension objectives. Described in detail were recent theoretical and methodological developments on children's discourse comprehension that could be insightful to knowledge of the process of discourse comprehension in children beginning to read and of the transfer of oral discourse processing skill to the processing of written discourse in early reading.

WILSON, MARILYN J. A review of recent research on the integration of reading and writing. *The Reading Teacher*, May 1981, *34*, 896–901.

Cites a number of research studies and suggests that reading and writing should be taught simultaneously, rather than teaching reading first.

LEHR, FRAN. Integrating reading and writing instruction. *The Reading Teacher*, May 1981, *34*, 958–961.

Provides a brief review of research concerning the relationship between reading and writing as well as teaching strategies suggested by that research.

GOODMAN, KENNETH S., & GOODMAN, YETTA M. Learning to read is natural. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *1*, 137–154.

Discusses views about the beginning reading process with special reference to natural language learning, the functions of language and the differences between oral and written language; when and how reading begins, and how beginners differ from proficient readers. Presents supporting research.

STICHT, THOMAS G. Applications of the Audread model to reading evaluation and instruction. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *1*, 209–226.

Relates a developmental model of auding and reading that maintains that reading develops on a foundation of language skills acquired in the oral mode by information-processing skills in auding and speaking. Three projects were reviewed on the Audread model to show the extent to which first-grade children learned to read the words thay could speak, to assess differences between auding and reading skills of adults, and to describe a functional job-related literacy program for adults.

LORTON, JOHN W.; FASTRING, BONNIE; & WALLEY, BERTHA L. Combining forces: music and reading. *Alabama Reader*, May 1981, *8*(2), 39–48.

Believes that there is a close relationship between music and reading as a symbol that expresses likenesses and differences in the use of sound. A number of research reports are referred to. Views on the language experience approach in reading were cited to support some basic assumptions about teaching music.

TAYLOR, GAIL COHEN. ERIC RCS report: music in language arts instruction. *Language Arts*, March 1981, *58*, 363–367.

Reviews the literature on the values and uses of music in the language arts curriculum and describes specific teaching methods used to integrate the two areas. Included are citations to research dealing with the relationship between music and reading achievement.

GRUNDIN, HANS U. Reading schemes in the infant school. *Reading (UKRA)*, April 1980, *14*, 5–13.

Reports the findings of a questionnaire to survey the use of reading schemes and returned by 631 British infant school heads. Also sought was information about the number of infants, the socioeconomic characteristics of the school, and the proportion of ESL children in each school. The findings indicated that most schools (73%) use only one principal scheme. The most common pattern is the use of one principal scheme and two to four supplementary schemes. Less than half of the respondents were satisfied with the current principal reading scheme, although most schools would not change their schemes even if funds were available. Dissatisfaction with the schemes was marked in schools where older schemes were used. Among weaknesses cited in current schemes were uninteresting content and or stilted, unnatural language. Also expressed were concerns about the grading of materials in reading schemes as well as about the insufficient amount of materials at each level. More than a third of all ESL infant school pupils are taught in schools which do not have any special materials for their reading instruction.

CORNO, LYN. Individual and class level effects of parent-assisted instruction in classroom memory support strategies. *Journal of Educational Psychology*, June 1980, *72*, 278–292.

Examines the effects on academic performance of the Learning Skills Program (LSP), a program designed to familiarize pupils with common classroom memory support strategies. The purpose of the LSP was to improve elementary school performance by sensitizing students to the teacher structuring strategies and the participation demand strategies commonly used in classrooms. The structuring strategies of the

LSP included discrete skills of reviewing, stating goals, summarizing and marking important points. Participation demand strategies included asking questions, volunteering, answering when called upon and talking about lesson material in class. The LSP training program consisted of eight 30-minute exercises, and was delivered by parents in the child's home. Undescribed teacher training variables and school district variables were included in the design with the LSP-Non LSP variables; the first two variables being from a larger study of which the present study was a part. To assess the effects of the LSP, pretests were administered in October and alternate forms of these tests were administered in January and May: the Vocabulary subtest of the *Cognitive Abilities Test*, the Reading Subscale of the *Metropolitan Achievement Test*, the Ravens *Standard Progressive Matrices*, a short form of the *Childrens' School Questionnaire* and a quiz constructed to assess knowledge of the LSP. Subjects were 637 third graders in 33 classrooms in two middle-class school districts in California. Data were analyzed with both classrooms and pupils as the unit of analysis. Of the 416 children assigned to the LSP group, 133 (32%) completed all eight lessons. Taking into account the number of LSP lessons completed, it was found that the LSP group scored significantly higher on all posttests. There were significant interactions between district teacher training and LSP treatments, however. It was also found that only classrooms of higher general ability were able to complete the LSP, thus making it appear that a significant degree of processing capability is required for metacognitive awareness. The LSP also appeared to benefit high-anxiety classes.

McCarthy, Lenore. Using distinctive features to help the troubled beginning reader. *The Reading Instruction Journal*, Fall 1980, *24*, 3–4.

Discusses the value of using the distinctive features of words and letters to help children learn to read. Research that deals with the identifying features of the alphabet is cited and implications for teaching based on the research are presented.

Baker, Eva L.; Herman, Joan L.; & Yeh, Jennie P. Fun and games: their contribution to basic skills instruction in elementary school. *American Educational Research Journal*, Spring 1981, *18*, 83–92.

Evaluates the relation between the use of diverse instructional materials and pupil performance. Diverse instructional materials included games, puzzles and other instructional adjuncts. The sample consisted of two second- and two third-grade classrooms from each of 72 different schools. Data included classroom observation and teacher and pupil responses to questionnaires and interviews. Achievement was assessed with specially developed measures of reading and mathematics and a modified version of the *School Sentiment Index*. The study reported significant achievement and attitude decrements associated with the use of diverse instructional strategies.

V-6 Teaching reading—grades 4 to 8

Collins, Cathy. Sustained silent reading periods: effect on teacher's behaviors and studen's' achievement. *The Elementary School Journal*, November 1980, *81*, 109–114.

Designs a project to identify the effects of sustained silent reading on the reading achievement scores of 220 second- through sixth-grade pupils. In addition, both teacher and pupil attitude was assessed. The following instruments were used: *Gates-MacGinitie Reading Achievement Test*, *the Iowa Tests of Basic Skills*, basal reader placement levels, Teacher Individual Pupil Evaluation Forms, *How I Feel About Reading*, and Attitude Assessment. The sustained silent reading program was carried on daily for 15 weeks. Pupils were assigned to either an experimental group or a control group. Pupils in the experimental program had sustained silent reading for

10 to 30 minutes, depending on the grade level. Differences in scores on the Gates were not significant. Experimentals advanced one-tenth of a book further in their basals than did controls. Attitudes of both groups became more negative toward reading and there were no siginficant differences between the two groups on these measures. As determined by the Iowa, the two groups showed similar growth in spelling and math. Experimental teachers did identify more of their pupils' reading interest but were not better able to recognize pupils' levels of reading abilities than control teachers.

FOLTA, BERNARR. Effects of three approaches to teaching poetry to sixth grade students. *Research in the Teaching of English*, May 1981, *15*, 149–161.

Examines the effectiveness of instructional support provided in three treatments for cuing sixth graders in interpreting metaphors in poetry. Treatment A involved only verbal cuing by teachers; Treatment B involved external support through the use of media; Treatment C involved internal support through the use of a poet rather than the teacher. A control group received no instruction in poetry. Each group contained 68 children in three intact classes. The three treatment groups received the same set of 24 poems from which 16 were selected for instruction over an eight-day period. All poems were taught using the same four-stage instructional model. The dependent variables were the raw scores of children's responses to Form B of *A Look at Literature*. Form A had been used a month prior to treatment as a screening device to match classes. Teachers and poets recorded questions, activities, and assignments used in follow-up with each poem. Posttest results on the 50-item test showed no significant differences among the four groups. However, when the scores for 11 critical items on the test were examined, the means were found to be 5.51, 6.63, 6.75, and 6.40 for groups A, B, C, and controls, respectively. The differences on these scores were significant between Treatments A and C and between Treatments A and B ($p = .05$). No other comparisons were significant.

FRANKLIN, SANDRA T., & MABRY, N. KEMP. Affective response with multimedia teaching of poetry. *Reading Improvement*, Winter 1980, *17*, 311–312.

Summarizes briefly the findings of a classroom study utilizing affective response in the teaching of poetry. Two groups of 42 seventh and eighth graders were equated for sex, grade level, intelligence test scores, grades, and socioeconomic level. Both were given a poem to read followed by a multiple-choice test. The experimental group additionally marked their ratings on 23 dimensions of their own affective response plus a set of 10 semantic differential scales. Two weeks later the multiple-choice test was readministered. The experimental group showed little loss in scores, but the control group's scores showed a significant loss.

COHEN, S. ALAN, & STOVER, GEORGIA. Effects of teaching sixth-grade students to modify format variables of math word problems. *Reading Research Quarterly*, 1981, *16*, 175–200.

Describes the nature and results of three related experiments concerning the influence of structural format variables on the reading of math problems by sixth and eighth graders. In the first study, 35 high I.Q. sixth- and eighth-grade pupils rewrote 15 typical math textbook problems to make them easier for children with math difficulties. Results revealed these children tended to simplify readability by substituting familiar vocabulary and shortening sentences. The second study drew upon the results of the first in the form of identical word math problems presented with simplifying modifications to 70 normal range sixth-grade math pupils. Easier readability of problems markedly increased problem success. The third study undertook to train 71 sixth graders with middle range math scores to self adjust to one of three treatment groups and served as controls for other treatments. Significantly superior results were achieved by students taught the strategies of adding needed diagrams, extracting extraneous information, and ordering numerical information.

ANKNEY, PAUL, & MCCLURG, PAT. Testing Manzo's guided reading procedure. *The Reading Teacher*, March 1981, *34*, 681–685.

Tests the effectiveness of the Guided Reading Procedure (GRP) in aiding fifth and sixth graders to retain information in science and social studies texts. Pupils in two social studies classes and two science classes received either the GRP or the usual approach to content area reading assignments. The GRP was taught via a seven-step approach. Immediately after the science and social studies selections were taught, pupils took a 10-item multiple-choice test. An alternate form of the test was given one week later, and a third form, four weeks later. In a second phase of the study, the authors switched experimental and control groups and repeated the procedures, except that the third test was omitted. The GRP group performed better than the control group on all tests given on one selection. When the control and experimental groups were reversed, the opposite results were found. When reading levels served as the covariate in the analysis, the GRP groups' test scores were significantly better in social studies but not in science. No differences were found for sex or reading ability levels.

DREHER, MARIAM JEAN, & SINGER, HARRY. Story grammar instruction unnecessary for intermediate grade students. *The Reading Teacher*, December 1980, *34*, 261–268.

Uses intermediate grade level pupils in an investigation to determine whether teaching children to identify the structure of a story improves recall. Subjects were 28 fifth-graders with a mean reading grade equivalent score of 5.96 on the *Comprehensive Tests of Basic Skills*. Children were assigned randomly to one of three groups: Group 1 was taught story grammar through a series of three stories, Group 2 read the three stories, and Group 3 received social studies instruction. Group 1 pupils received story structure instruction over three 45-minute lessons. Following instruction, the teacher read a fourth story aloud to all pupils as they followed along in their own copies. Following a five-minute interpolated task, pupils were asked to write down what they could recall of the story. Each pupil's recall was then scored for the presence of 42 propositions. No significant differences were found among the three groups either in the number of propositions recalled on in the pattern of recall.

KEMP, MAX. An in-classroom investigation of Reading Booster Cards. *Australian Journal of Reading*, August 1980, *3*, 123–130.

Questions the passage dependence of selections in the *Reading Booster Cards* as used in Australian classrooms for intensive short-term practice on reading comprehension development. Two open-space classroom groups were used as subjects; one included 37 children with a mean age of 9-11, and the second consisted of 30 children with a mean age of 11-5. One reading card was identified for use with each group. Procedures involved answering comprehension questions without reading the passage, and answering questions after reading under recorded time conditions. An analysis of mean scores indicated that both groups attained close to or higher than a 50% pass mark on questions that did not require the reading of the passage. Answering the same questions after reading the selection as a posttest condition, the students did not achieve statistically significant higher means than the mean scores of correct responses to questions when the selection was not read. Further analyses indicated that faster readers tended to score worse on the second test while slower readers improved their scores.

GIPE, JOAN P., & ARNOLD, RICHARD D. Teaching vocabulary through familiar associations and contexts. *Journal of Reading Behavior*, Fall 1979, *11*, 281–284.

Designs and tests the efficacy of four techniques for teaching word meanings. Subjects were 93 third graders and 78 fifth graders who were taught a total of 96 words in groups of 12 a week for eight weeks. The words taught consisted of those most

frequently missed on a 150-word vocabulary checklist administered prior to the study. The techniques used were: 1) the association method, pairing the unknown word with a familiar synonym; 2) the category method, requiring pupils to add to a list of words fitting a general category; 3) the context method, utilizing words in meaningful sentences; and 4) the dictionary method, looking up the target word, writing the definition, and writing a sentence using it. Amount of new vocabulary retained was assessed. The context method was significantly more effective than the other three. Data were analyzed also for good and for poor readers. The context method showed better results across grade levels and across ability levels.

CUNNINGHAM, PATRICIA M.; CUNNINGHAM, JAMES W.; & RYSTROM, RICHARD C. A new syllabication strategy and reading achievement. *Reading World*, March 1981, *20*, 208–214.

Evaluates the relation between reading achievement and a new syllabication strategy designed not to require prior pronunciation of the word to be divided. The syllabication system was based on an analysis of the 405 most common polysyllabic words listed in the *American Heritage Word Frequency Book*. Three rules accounted for correctly dividing 87% of these words. Fourteen classes of rural-suburban third and fourth graders were the subjects. All pupils were given a syllabication test and several subtests of the *California Achievement Test* in December and again in May. An experimental group of 14 classes was formed on the basis of willingness of the school district to participate. Fourteen control classes came from an adjacent district. Experimental group teachers were given five training sessions throughout the treatment time. Children were given 15 minutes of instruction daily for 15 weeks. All instruction was carried out by the regular classroom teachers. Instruction was done with the whole class and this instruction replaced the syllabication and word analysis instruction outlined in the basal reader used. In addition, to the new syllabication strategy, pupils were given practice in comparing and contrasting unknown words to words already known and in pronouncing these words. A two-way multivariate analysis of multiple covariance revealed no significant differences between the experimental and control groups on vocabulary or reading comprehension.

BLANCHARD, JAY S. Preliminary investigation of transfer between single-word decoding ability and contextual reading comprehension by poor readers in grade six. *Perceptual and Motor Skills*, December 1980, *51*, 1271–1281.

Examines the transfer of single-word decoding training to contextual, literal, and inferential reading comprehension of below average reading sixth graders. Subjects were taught to read all the words that were used in a passage (content specific) or were taught to read another set of words, none of which appeared in the passage (non-content specific). After learning the words, all pupils read the passages and their reading comprehension was assessed. This procedure was carried out each of four days, using a different fifth grade passage from the McCall-Crabbs *Standard Test Lessons in Reading* each day. All the words in a story were presented; the average number presented each day was 84. Presentation was exposing each word and saying it until a child could identify all words. The 60 urban South subjects were at least one year behind grade placement in total reading scores on the *Comprehensive Test of Basic Skills*, but were able to read at least 90% of the 110 words on Coleman word list. The latter test was used to screen out children with poor visual memory. IQ on the *Peabody Picture Vocabulary Test* was a covariate. The 60 children were divided into groups of 30 very poor (VP) readers and 30 poor (P) readers on the basis of reading achievement scores. The average IQs of VP and P readers were 77 and 88 respectively and average reading grades were 3.1 and 4.6 respectively. Half of the VP and half of the P subjects were assigned to the content specific method, the other half of each group was assigned to the non-content specific method. The content-specific training group answered significantly more literal and inferential questions correctly than did those given non-content specific training. P group comprehended significantly more

than VP group, but there was no significant interaction between method and reading ability.

DUFFELMEYER, FREDERICK A. A comparison of average readers at different grade levels. *Reading Horizons*, Winter 1981, *21*, 143–146.

Compares vocabulary and comprehension scores of average readers in grades two through six in a sample of 414 pupils to ascertain whether the percent of balanced, word dominant, and paragraph dominant readers varies as a function of grade level. An average reader was judged as one who scored within the four-to-six stanine range on the *Gates-MacGinitie Reading Tests*. Readers were categorized as balanced when their Vocabulary and Comprehension stanine scores were either identical or failed to differ by more than one stanine. An examination of test scores disclosed that regardless of grade level, most readers (79%–88%) were classified as balanced. The next most prevalent category was word dominant, that is, readers whose Vocabulary stanine scores were two or more stanines higher than their Comprehension scores. Word dominant readers ranged from a low of 9% at grades three and five to a high of 14% at grade four. The range for the paragraph dominant category was from 3% at grade three to 8% at grade six.

BROOKOVER, WILBUR B., & LEZOTTE, LAWRENCE. *Changes in school characteristics coincident with changes in student achievement*. (Occasional Paper No. 17). East Lansing, Michigan: The Institute for Research on Teaching, Michigan State University, 1979.

Examines whether changes in pupil achievement profiled over time were related to parallel changes in social structure and school climate. The study examined eight elementary schools, six that had experienced increases in fourth grade state assessment scores between 1974 and 1976, and two schools that had declining scores in that same period. Pairs of trained interviewers visited each school for three to five days and interviewed faculty and staff and distributed questionnaires. The major finding of the 10 findings reported was that increasing achievement schools placed considerably more emphasis on the basic skills of mathematics and reading than the declining schools. Recommendations and conclusions are provided.

WRAY, DAVID. The provision and use of resources for reading in a Cumbria junior school. *Reading (UKRA)*, April 1980, *14*, 21–26.

Conducts a survey of the resources available for reading instruction in one large British junior school. The resources for skill acquisition were primarily (69%) for English. Although seven other curriculum areas were represented, the resources found in no instance exceeded 8% for any one other area. Library books were divided according to readability levels. There were 450 fiction books and 370 non-fiction books for readability ages of 7 to 9; for readability ages 9 to 11, the respective numbers were 890 and 1,590 for fiction and non-fiction. Few of the books were written from a perspective other than average middle class. The mean number of books read by Lower Junior faculty was 53; by Upper Junior faculty, 41. The library contained only books and periodicals, but no other types of reading materials.

V-7 Teaching reading—high school

HAFNER, LAWRENCE E., & PALMER, BARBARA C. The differential effects of three methods of teaching on the reading comprehension and vocabulary of ninth grade students. *Journal of Educational Research*, September/October 1980, *74*, 34–37.

Studies the differential effects of two methods of teaching reading comprehension and one method of teaching vocabulary on comprehension and vocabulary

achievement of grade nine students. Along with a control group, three experimental groups were used: 1) MRM, identifying sentence kernels; 2) LOGANAR, logically analyzing cognitive relationships; and 3) vocabulary. Subjects in the three groups numbered 20 (MRM), 15 (LOGANAR), and 25 (vocabulary) with an additional 20 in the control group. The pretest covariate was the *Ohio State University Psychological Exam* (OSUPE), Vocabulary Subtest. Posttests were the Vocabulary Subtest of the OSUPE; the *Nelson-Denny Reading Test*, Vocabulary Subtest; and the *Davis Reading Test*, Grades 8 - 11, Level of Comprehension and Speed of Comprehension. Experimentals were exposed to 11 lessons, approximately 35 minutes each, over five-and-one-half weeks. Students in the MRM and LOGANAR did significantly better than the control or vocabulary group on reading vocabulary, reading comprehension, and speed of reading comprehension with the exception of the vocabulary group equalling the MRM group's performance on the Nelson-Denny vocabulary subtest. No sex differences were noted.

READER, LYNNE G. Reading skills in a paperback classroom. *Reading Horizons*, Fall 1980, *21*, 17-21.

Contrasts amount of reading, attitude towards reading, and reading achievement test scores for a control group of 32 students and an experimental group of 69 students enrolled in a popular fiction class using high interest paperbacks. The experimental class was an 18 week semester elective for high school juniors and seniors. They were required to read a minimum of nine books, to complete one or more assignments for each book, and to pass an objective test over the book. Books were counted as read if a score of 70% or better was obtained on the objective measure. Pre- and posttest scores on the *Nelson-Denny Reading Test* for vocabulary, comprehension, and rate were obtained, records were maintained on the number of books read and on the grades students earned in the course. Controls showed an average gain of .4 years on the total Nelson-Denny score; experimentals, a 1.3 year gain on total scores. For rate, experimentals showed a gain of 2.6 years, and controls, a loss of .4 years. An affective measure indicated a growth in enjoyment of reading in the experimental class.

SANDFORD, HERBERT A. Directed and free search of the school atlas map. *The Cartographic Journal*, December 1980, *71*, 83-92.

Cites research on the use of maps by British school children. In particular, differences in the way children use a map under direction as opposed to their voluntary use of one are indicated. In one survey of 1,600 secondary school geography students, it was found that 74% had access to an atlas at home and that 66% used it. Research supporting a hierarchy of operations performed on a map is noted with perception of the symbols followed by their appreciation or comprehension. Other reasearch has suggested that teachers expect less advanced reading and interpretation of symbols and maps than did pupils. Children left to their own devices appear considerably preoccupied with the meaning of symbols. Descriptions by children of their free use of a map identify stages beginning with an entrance phase, followed by an exploratory phase, and a concluding phase.

FAWCETT, ROY. Reading laboratories. In Eric Lunzer & Keith Gardner (Eds.) *The effective use of reading*. London: Heinemann Educational Books, 1979, 193-227.

Inquires into the effectiveness of the *SRA Reading Laboratories* with three age groups in Britain: fourth-year juniors, first-year secondary, and fourth-year secondary students. A total of 530 experimental students and 488 controls were involved. In September of the school year, all students were administered the appropriate levels of the *Gates MacGinitie Reading Tests* and the *NFER Reading Test*. Alternate forms of

the Gates MacGinitie were given as immediate posttests in December and January and as delayed posttests in June. The NFER was also given again in March-April. Two unstandartized tests were also given, the Brighty as a pretest and the Alistair as a posttest. On the Gates-MacGinitie all groups showed gains in rate, accuracy, vocabulary, and comprehension with the exception of fourth-year secondary control students. At all levels, speed and accuracy gains for experimentals were statistically significant over those for controls. All other tests tended to favor the experimentals also. A second small-scale study was made comparing the SRA materials with the Ward Lock Educational *Reading Workshops*. Two classes in each of three junior schools participated in a one semester program, one class using the SRA and one using the Reading Workshops in each school. One hundred children were involved in each group. Differences in gains between pre- and posttest Gates-MacGinitie scores were significant only in speed and accuracy and favored the SRA group. In yet a third exploratory study, 34 children in vertically grouped third- and fourth-year classes in the author's school served as subjects. During the first term, half of the children acted as experimentals and half as controls. Experimentals worked with the SRA laboratory in two groups. One of the SRA groups and one control group were additionally given a six weeks' program of discussion in relation to text. All SRA and group discussion was carried out by the experimenter. Children were tested in September, January, and March with the Gates-MacGinitie, the Waite tests, and six passages similar to those used by the Waite. Two of the six passages were used at each testing period and required the writing of a summary plus answering a series of objective questions. At the March testing, the SRA plus discussion group showed the greatest gains in all areas except rate.

DeRoche, Edward F. Newspapers in education: what we know. *Newspaper Research Journal*, April 1981, *2*(3), 59–63.

Reviews the results of several studies regarding the use of newspapers as an instructional tool and their influence on attitudes and achievement. Research on teachers' attitudes suggests that teachers who participate in training programs on using newspapers and who use newspapers in their classes have favorable attitudes about their value for teaching and learning. Findings also indicate that students have favorable attitudes towards the use of newspapers in class and express an increased interest in reading and current affairs. One study found that among those who used newspapers in school, two out of three became subscribers. Evidence has been found demonstrating that the use of newspapers improves newspaper reading competencies of students. Knowledge of current events and newspapers is greater in classes using newspapers than in classes which do not.

V-8 Teaching reading—college and adult

Thum, Carl P. Understanding the meaning of learning centers. *Reading World*, December 1980, *20*, 99–106.

Proposes to clarify the meaning of the term, learning center, by means of a conceptual analysis study. Examples of the use of the term were derived from learning center definitions, activities, and philosophies found in the literature. The examples were then classified according to commonalities and distinctions. A second examination of the examples was then made in terms of program descriptions of learning centers. Additionally, the history of learning centers was studied and a review of the literature on learning centers was conducted. Two basic categories of learning centers were identified: 1) learning assistance centers, and 2) resource and instructional media learning centers.

SANDERS, VICKIE. College reading studies: do they make any difference? In Gwyn Enright (Ed.) *Proceedings of the Thirteenth Annual Conference of the WCRA* (Western College Reading Association), 1980, *13*, 24–29.

Uses a meta-analysis approach in analyzing and integrating the findings of 28 studies on the effectiveness of college reading and study programs. The 28 studies represented 6,140 students. Each study was examined for effect size, reported inclusion of 6 content factors, 17 operational factors, and program effects. Three categories of programs were identified based on the description of the students participating: 1) corrective-remedial, 2) academic support, and 3) developmental. Overall, reading-study instruction tended to be beneficial as determined by reading comprehension, reading rate, GPA, vocabulary, and study habits. In four of the five variables tested, statistically significant changes occurred.

FORD, N. Teaching study skills to teachers: a reappraisal. *British Journal of Teacher Education*, January 1980, *6*, 71–78.

Reviews selected research on the teaching of study skills and critically evaluates its applicability. The author argues that the research into study skills has many problems and that our knowledge base in this area is limited. In the article, questions are raised about whether or not study skills are teachable. Additionally, the author maintains that materials and study techniques based on research are problematic at best.

RICKMAN, LINDA WILKINS. Arizona educators assess the teaching of study skills. *The Clearing House*, April 1981, *54*, 363–365.

Gathers information via questionnaires on the timing, approaches, and materials used for the teaching of study skills in Arizona. A total of 469 questionnaires was sent out; nearly one-third were returned. Five forms of the questionnaire were developed, one each for administrators, teachers, counselors, university faculty, and student teachers. Administrators, teachers, counselors, and student teachers agreed that study skills were periodically assessed in their schools throughout the grade levels and at various times. Study skills were taught in many subject areas in all grades and generally in individual classrooms. Nearly half of the student teachers, teachers, and counselors reported that they had no special training in teaching study skills. Lecture, small group, and individualized instruction were mentioned most frequently as the grouping patterns and methods for instruction in study skills. Many respondents (no numerical figures cited) indicated a desire for more knowledge about instructing in this area. Of the administrators responding, 92% reported that their schools had learning center libraries. Over 50% of faculty members in the one university surveyed returned their questionnaires. Half of the respondents replied that they taught study skills to all students as a regular part of their course.

JACQUES, ROSE Y., & CORRIN, JAY P. Reading improvement: a collegiate approach. *New England Reading Association Journal*, 1981, *16*(1), 17–20.

Undertakes a 13-week study designed to analyze the effects of instruction in critical reading skills on reading achievement, class performance, and social science grades of college freshmen. Subjects consisted of 41 experimentals and 23 controls. Pre- and posttest assessments were made using alternate forms of the *Stanford Diagnostic Reading Test*, Blue Level. Instruction consisted of study guides including an explanation of the critical reading skills to be emphasized, an advance organizer, and two sets of questions incorporating literal and analytical/evaluative/synthesis comprehension. Study guides were given a week prior to when the social science reading assignments were due and checked guides were returned the day after they were collected. Differences in social science grades favored the experimental group at the .05 level of significance. There was significant growth on the Stanford in both literal and

inferential scores. Improvement in class participation by experimentals was noted by the authors.

WHIMBEY, ARTHUR; CARMICHAEL, JR., J. W.; JONES, LESTER W.; HUNTER, JACQUELINE T.; & VINCENT, HAROLD A. Teaching critical reading and analytical reasoning in Project SOAR. *Journal of Reading*, October 1980, *24*, 5–10.

Describes a precollege summer program, Project SOAR, which uses a method of teaching comprehension and analytical skills that emphasizes the connection between the two. Evaluation data are presented. Students were in the SOAR program for five weeks. In addition to a questionnaire and an instrument designed to assess Piaget's levels of intellectual development, pre- and posttest comparisons on the reading and vocabulary portions of the *Nelson-Denny Reading Test* were made for various subgroups. For those students who scored less than or equal to the tenth grade level on comprehension section of the Nelson-Denny pretest, a gain of 2.3 grade levels was found for the posttest. Average increase in performance on the vocabulary portion of the Nelson-Denny ranged from 1.8 grade levels to 2.2 grade levels. Pre- and posttest scores on the *Preliminary Scholastic Aptitude Test* showed an average increase of 7.3 points for the 73 students on whom scores were available.

SILVA, ALBERT M. An evaluation of the effectiveness of a course offered at a learning assistance center. In Gwyn Enright (Ed.) *Proceedings of the Thirteenth Annual Conference of the WCRA* (Western College Reading Association), 1980, *13*, 53–56.

Uses increase in grade point average (GPA) as the basis for evaluating the effectiveness of a college reading and study skills program (RSS). One group of 33 students who successfully completed the RSS were matched with a control group on college affiliation and academic status. The study covered three semesters. GPA's were collected for the semester preceding, the semester during, and the semester following enrollment in the RSS class. Gains for the experimental group were not significantly greater than for the controls.

PRESSLEY, MICHAEL; LEVIN, JOEL R.; & MILLER, GLORIA E. How does the keyword method affect vocabulary comprehension and usage? *Reading Research Quarterly*, 1981, *16*, 213–226.

Conducts a series of four experiments to determine the effect of the keyword method on vocabulary acquisition. The first two experiments explore whether the method affects comprehension of vocabulary items encountered in sentence contexts while the third and fourth investigate its effect on the ability to use vocabulary items in sentence contexts. Subjects in Experiment 1 were 16 experimentals and 16 controls, all undergraduate students; in Experiment 2, 14 and 15 undergraduates were randomly assigned to the keyword or the control group. Subjects were shown sentences containing 32 previously presented vocabulary terms and were to determine if the words were correctly used in the sentences. In both experiments, some of the words fit the sentence and some did not. In Experiment 1, only one word would fit the sentence context, whereas in Experiment 2, more than one vocabulary term would be appropriate. In Experiment 1, keyword and control subjects averaged 90.2% and 74% correct identifications, respectively; in Experiment 2, the corresponding correct identifications were 72.9% and 64.5%. In Experiments 3 and 4, subjects were 28 and 29 undergraduates, respectively, again divided into keyword and control groups. The requirements in these two experiments were to place the learned terms into appropriate sentence contexts. For Experiment 3, a modified cloze task was used, and for Experiment 4, subjects constructed their own sentences. In both experiments, keyword subjects outperformed controls.

PRESSLEY, MICHAEL, & LEVIN, JOEL R. The keyword method and recall of vocabulary words from definitions. *Journal of Experimental Psychology: Human Learning and Memory*, January 1981, *7*, 72-76.

Performs three experiments investigating the use of the keyword method of foreign vocabulary learning. Subjects were undergraduates enrolled in introductory psychology classes. The keyword method facilitated vocabulary recall when the vocabulary items were well integrated in the students memories prior to definition learning. The authors discuss the results in relation to theories of mnemonic effectiveness and research on backward recall of vocabulary terms.

DUFFELMEYER, FREDERICK A. The influence of experience-based vocabulary instruction on learning word meanings. *Journal of Reading*, October 1980, *24*, 35-40.

Undertakes a comparison of an approach to vocabulary instruction relying on experience with a control approach. Four sections of a college reading study skills course were randomly assigned to experimental or control conditions. The 56 subjects enrolled in the four sections were then divided into lower, middle, and upper thirds of reading ability on the basis of *Nelson-Denny Reading Test* Form C, scores. The experiential groups consisted of students enacting 10 investigator-prepared skits. One set of five skits each was enacted during the first class session of two successive weeks. The skits were designed to convey the meanings of words which had been selected from two passages of the comprehension section of Form A of the Nelson-Denny. Control sections used a traditional approach to vocabulary involving context clues, structural analysis, and dictionary usage. The same 10 words were taught. Two instructor developed vocabulary tests were used to evaluate the effects of the two approaches. Experimental group means were consistently higher than those of the control group for all levels of ability; the differences were significant for all levels except for good readers on the second test.

HAGGARD, MARTHA RAPP. Vocabulary acquisition during elementary and post-elementary years: a preliminary report. *Reading Horizons*, Fall 1980, *21*, 61-69.

Summarizes the results from a preliminary study and presents the findings of a subsequent study, both examining how new words are learned. In the original or preliminary study, 26 college students were asked to respond to three questions to determine if they could recall specific instances as a child and as an adolescent or young adult when new words were learned and what strategies were used to learn them. Four major types of conditions were identified for both elementary and post-elementary years: 1) the word was spoken by an older person and its sound or adultness was appealing; 2) the word had immediate usefulness; 3) the word involved an incident with strong emotions; and 4) the word was learned as a result of peer usage. In learning words, first meaning was obtained and then the word was rehearsed through repeated usage. In the second study, 23 college freshmen and 21 graduate students were asked the same three questions. Responses for each group were categorized into the four conditions identified earlier and then compared for the two groups. At the elementary level, freshmen had five responses categorized under Condition 1; the graduate group, nine responses. Both groups had four responses in Condition 2. In Condition 3, freshmen gave six responses, graduate students, five. For Condition 4, graduate students had no responses and freshmen had three. At the post-elementary level, freshmen had the greatest proportion of their responses, over 50%, categorized as Condition 4 and about 40%, or 9, were categorized under Condition 2. The graduate

responses numbered 3, 4, 5, and 4, respectively in Conditions 1, 2, 3, and 4. The vocabulary acquisition strategy reported most frequently was to find the meaning of the word and the method used was looking it up in the dictionary.

SIMONSON, CAROLYN A., & STEADMAN, CAROLE J. Using testing and self-assessment for better advising and placement. In Gwyn Enright (Ed.) *Proceedings of the Thirteenth Annual Conference of the WCRA* (Western College Reading Association), 1980, *13*, 57–64.

Describes the use of the *Comparative Guidance and Placement Tests* (CGT) and a locally constructed *Self Assessment and Course Selection* form as tools in the guidance process of students at a community college. In particular, students were advised into one of three placement levels according to results on the guidance evaluation program. Level one was remedial. Level two was developmental, and level three was college transfer. When students completed a self-assessment form which provided information in the areas of likes and dislikes, abilities, and high school grades on reading, English, and math, faculty advisors compared this information with students' CGT scores to judge the basis for course selection. Included in the article was the assessment and course selection forms. Success rates relative to initial placement are presented.

IRWIN, DIANNE E. Effects of peer tutoring on academic achievement and affective adjustment. In Gwyn Enright (Ed.) *Proceedings of the Thirteenth Annual Conference of the WCRA* (Western College Reading Association), 1980, *XIII*, 42–45.

Investigates the effects of peer tutoring in a college learning center on academic achievement and affective adjustment. Subjects were 150 undergraduates enrolled in a statistics class. They were divided into three groups based on their grade point average (GPA): 1) low GPA, less than 2.35; 2) medium GPA, greater than 2.35 but less than 3.33; and 3) high GPA, greater than 3.33. One half of the students in each group were assigned randomly to the treatment group. Peer tutors were paid and were required to have a minimum GPA of 3.0 in the courses to be tutored. Each tutee received three to five hours of tutoring per week for 10 weeks. Pre- and posttest attitude measures were collected using the *Profile of Mood States*. At each ability level, students receiving tutoring showed significantly higher final grades in statistics than did the control students. A similar finding occurred for the attitude measure.

DOCHEN, CAROL, & JOHNSON, DE. The last chance: a program for transfer students with low GPA's. In Gwyn Enright (Ed.) *Proceedings of the Thirteenth Annual Conference of the WCRA* (Western College Reading Association), 1980, *XIII*, 35–41.

Describes and presents evaluative data on a program designed to aid undergraduates transferring into a college with low grade point averages. The special program students tended to be individuals of average to superior intelligence from middle to upper socioeconomic backgrounds but had extremely poor study habits. Three different programs were offered for these probationary students. The first was a three credit elective course stressing learning strategies and self management. The second involved individualized study in the learning center with a stress on study skills. The third was designed to aid students focus on academic problem areas, learn techniques and skills to overcome the problems, and recognize how to transfer the skills to other problem areas. The increase in students succeeding in meeting their probationary terms went from 39% to 62.9%.

V-9 Teaching materials

JOHNSON, DALE D., & BARRETT, THOMAS C. Prose comprehension: a descriptive analysis of instructional practices. In Carol M. Santa and Bernard L. Hayes (Eds.) *Children's Prose Comprehension: research and practice*. Newark, Delaware: International Reading Association, 1980, 72–102.

Examines the comprehension tasks suggested in four series of basal readers at two grade levels and those suggested in five professional texts. The authors begin by developing a framework of 17 comprehension tasks to serve as a criterion reference for their analysis. Scope and sequence charts and teacher manuals were examined at grade levels three and five in the four basal series to determine which of the 17 comprehension tasks were included. In addition, the comprehension tasks were identified and tabulated separately for literal and inferential levels. Extent or quality of instruction was considered outside the scope of the research and not evaluated. The authors found almost no instruction at either grade level in using mental imagery, reading punctuation marks, or dealing with anaphoric relations. Considerable overlap was found between the 17 criterion comprehension tasks and the comprehension tasks listed in the five textbooks when both basal series and professional tests were combined, the least taught or recommended tasks were anaphoric relations, paraphrasing, mental imagery, punctuation, figurative language, and ambiguous statements. In terms of frequency of mention, main ideas and supporting details were most taught or recommended.

CHEEK, EARL H. A hierarchy for teaching phoneme-grapheme correspondences in beginning reading. *Reading Improvement*, Fall 1980, *17*, 200–207.

Assigns 46 phoneme-grapheme correspondences to readability levels and derives a hierarchy for teaching phoneme-grapheme correspondences. For every level, each phoneme was classified according to its corresponding grapheme options. The level of phoneme-grapheme correspondences was determined by listing the total number of words containing a given phoneme-grapheme option at each readability level from 1.0 to 5.0 as found on the *Cheek Master Word List*. The level at which five words containing that particular phoneme-grapheme correspondence first occurred was then determined to be its readability level. Presented were summaries in table form of the voewl and diphthong phonemes, consonant phonemes, by readability ratings.

GRIEF, IVO P. A study of the pronunciation of words ending in a vowel-consonant-final *E* pattern. *The Reading Teacher*, December 1980, *34*, 290–292.

Identifies all words with a vowel-consonant final *e* pattern from a corpus of 138,000 entries in the *New Grolier Webster International Dictionary of the English Language* to find out the reliability of the final *e* as a visual cue to the pronunciation of the preceding vowel. Pronunciation of words which did not fit the rule was rechecked word by word in two other standard dictionaries. From a total of 7,687 words containing the VCE pattern, 3,592 or 47% did not fit the rule.

POLLOWAY, EDWARD A., & POLLOWAY, CAROLYN H. Survival words for disabled readers. *Academic Therapy*, March 1981, *16*, 443–448.

Presents a list of 50 words and 50 phrases (two to four words) that could be used as a basic survival vocabulary for adolescents with severe reading disabilities. Initially, 154 words and phrases were selected from several other vocabulary lists. These items were then ranked by 80 central Virginia special educators, resulting in the final two fifty-item lists.

JOHNS, JERRY L. The development of the revised Dolch list, *Illinois School Research and Development*, Spring 1981, *17*(3), 15–24.

Presents a revised list of the Dolch 220. The study examined four other lists of words to derive the revised Dolch list: The American Heritage Intermediate List, the Durr List, the Kucera Frances list (the first 500 words), and the Murphy List. The study reports also the percentage of Dolch words not in each list.

BECK, ISABEL L., & BLOCK, KAREN K. An analysis of two beginning reading programs: some facts and some opinions. In Lauren B. Resnick & Phyllis A Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *1*, 279–318.

Delineates and compares the *Ginn Reading 720 Program* and the *Palo Alto Reading Program* in three general categories. First, what is taught; that is, the subject matter that included, for example, facts, rules and concepts. Second, when it is taught in terms of time and order variables. And third, how it is taught, which consisted of comparing instructional strategies that are recommended for teachers to use when imparting new content. After each analysis of a given category, preference was stated for a particular approach.

OGLETREE, EARL J., & OGLETREE, GERDA. DISTAR rated by innercity teachers. *Illinois Reading Council Journal*, October 1980, *8*, 5–10.

Distributes a 36-item questionnaire survey to elementary teachers who had taught DISTAR in order to evaluate the program's effectiveness in schools located in a lower socioeconomic, black inner-city area of Chicago. The schools received ESEA, Title I funds. Of the 100 questionnaires distributed, 72% were returned. In terms of overall effectiveness, 58% of the respondents agreed that DISTAR was an effective method of teaching reading, but 78% disagreed that the program was equally effective with all children. Also among a variety of other findings, 56% of the teachers disagreed that DISTAR is a motivational reading system for all children; 40% would use the program even if they had an option of not using it; and 53% believed that the attention span of the children was not better with DISTAR than with other subject areas.

EARP, N. WESLEY, & TANNER, FRED W. Mathematics and language. *Arithmetic Teacher*, December 1980, *28*, 32-34.

Assesses the ability of two classes of sixth graders to decode and comprehend common and mathematical terms in their arithmetic texts. Words in the arithmetic text were classified as basal words from the Dolch list (N=101), common and non-mathematical words (N=418), and mathematical words (N=197). Fifteen words each from the common and mathematical lists were selected at random. The 51 children involved were then shown the words and asked to decode them, articulate one or more meanings for each. If a mathematical word was not properly identified, children were then shown the word in a sentence from the text and asked to identify it again. Words still not properly explained were shown in stronger context to aid in determining meaning. Children properly decoded 97.4% of the common words and 92.7% of the mathematical words. However, they were able to define 98.1% of common words but only 49.9% of mathematical words. With the aid of the arithmetic book sentence, they defined an additional 8.4% of the mathematical words. When the stronger context was provided, an additional 15.2% of the words were defined.

FITZGERALD, GISELA G. Readability of the Fry sampling procedure. *Reading Research Quarterly*, 1980, *15*, 489–502.

Examines and evaluates the sampling reliability of the procedure recommended by Fry in estimating a book's readability level. Two distinct but related data analyses were undertaken: 1) a computation of confidence intervals based on variable sample sizes, and 2) a computation of power functions based on variable sample sizes. A sample size of three was found to be inadequate in estimating population readability means because 1) the standard error among samples is frequently very high; 2) the confidence intervals on samples of three are often so broad as to be of little value in locating the true population; and 3) the probability of Type II errors is unacceptably high with this sample size. No estimate of a reliable number of sample passages for estimating Fry readability was given.

FITZGERALD, GISELA G. Assessing word-difficulty in basal workbook vocabulary exercises. *Reading Improvement*, Winter 1980, *17*, 248–253.

Assesses the grade level difficulty of individual words appearing in basal workbook vocabulary exercises. Fifty-five workbooks at grade levels three through six from the following basal series were included: Allyn & Bacon (1978), American Book Co. (1977), Economy Company (1975), Ginn & Co. (1976), Harcourt, Brace (1974), Harper & Row (1977), Holt, Rinehart and Winston (1977), Houghton Mifflin (1976), Macmillan (1975), and Scott, Foresman (1978). A total of 2007 sample words were collected from the 55 workbooks, and their difficulty level was determined by the Dale-O'Rourke Vocabulary. Except for one basal series, all of the third grade level workbook exercises demonstrated good control of vocabulary difficulty. Overall, the vocabulary in fourth grade workbook exercises showed a lack of control, with up to 70% of the items rated between 6th and 16th grade level difficulty. The control of vocabulary difficulty in fifth grade workbook exercises was generally reasonable when compared with fourth grade workbooks. Workbook exercises at the sixth grade level demonstrated a lack of difficulty control, with up to 61% of the items rated between 8th and 16th grade level difficulty.

HENDERSON, JENNIFER. Two-level readers—an investigation. *Australian Journal of Reading*, August 1979, *2*, 152–158.

Applies the Flesch Reading Ease formula and the Flesch Human Interest Formula to two Australian primary school readers, each book purported to be written in two versions, one for average readers (A) and one for poor readers (B). There was no significant difference in the readability levels of one reader, and though the difference between A and B levels of the second was significant, it was minimal. There was no significant difference in the Human Interest scores of the A and B levels of each book.

HARRISON, COLIN. Assessing the readability of school texts. In Eric Lunzer & Keith Gardner (Eds.), *The effective use of reading*. London: Heinemann Educational Books, 1979. 72–107.

Analyzes three aspects of readability of reading materials used in English secondary schools: 1) which methods of predicting text difficulty were most useful to teachers, 2) the extent to which readability formulae seemed more effective with one age range rather than another, and 3) the extent to which formulae were accurate in predicting the difficulty of texts in different subject areas. Textbooks were examined from the subject areas of English, mathematics, science, and social studies in the first and fourth years of 10 different English secondary schools in one Local Educational Authority near Nottinghamshire. The average Flesch Reading Ease reading age of all texts was 12.7 for first year books and 13.6 for fourth year books. Although there was little variability between the mean readabilities of texts in the four subject areas, there was considerable variability in their standard deviations. The range of readabilities was

considerably greater for social studies and science than for mathematics and English. A stratified sample of 23 first and 16 fourth year reading passages was given to 24 experienced secondary school teachers and 175 first- and fourth-year students. These subjects rated the difficulty of each passage. Cloze tests on each passage were administered to 200 first and fourth year students in another school district. Average teacher ratings correlated with the ratings of 10 readability formulas between .60 (Forcast) and .77 (Dale-Chall). For both first and fourth year materials, teacher and student ratings of passage difficulty were significantly correlated with cloze performance (.51 to .69). Readability formulae correlated between .35 and .61 with cloze performance.

GOLDSMITH, ROBERT H. Readability and filmstrip selection in science. *School Science and Mathematics*, April 1980, *80*, 335–338.

Compares the Fry and Dale-Chall readability levels of seventy 35 millimeter filmstrips to the grade level suggested by the publisher. The results indicated that the readability levels were substantially higher than the suggested grade levels.

MACDONALD, THÉODORE H. How can I study science when I can't read the book? *Australian Journal of Reading*, *3*, August 1980, 137–142.

Evaluates the readability level of two sets of science textbooks used in levels 7, 8, 9, and 10 in New South Wales (NSW). These texts were ranked by 55 NSW level 7, 8, 9, 10 science teachers as those most frequently used. Readability was assessed with the Fry and the SMOG formulae. One set, New Active Science, had average Fry readabilities of approximately 8.0; the other set, Investigations Into Science, had an average Fry readability of approximately 10.5.

BRADLEY, JOHN M.; AMES, WILBUR S.; & MITCHELL, JUDY N. Intrabook readability: variations within history textbooks. *Social Education*, October 1980, *44*, 524–528.

Computes the intrabook readability levels of eight junior high school American History textbooks. Three topics were identified as appearing near the beginning, middle, and end of each book. The Fry Readability Scale was applied to the portions of texts dealing with the three topics. The range within each topic varied markedly in all texts, with topics in four different texts showing a range from grade four to college level. Mean reading scores showed a range from grade seven to eight in one text to grade nine to college level readability in another. One topic, Reconstruction after the Civil War, ranged six grades in readability across publishers. Of the 24 topic sections studied, only three had less than 25% of text written above a ninth-grade level. In half of the 24 topic sections, more than 50% was written above a junior high school level.

ANDRASIK, FRANK; HEIMBERG, RICHARD G.; EDLUNG, S. REBECCA; & BLANKENBERG, RICHARD. Assessing the readability levels of self-report assertion inventories. *Journal of Consulting and Clinical Psychology*, February 1981, *49*, 142–144.

Applies the *Flesch Reading Ease* formula to eleven self-report assertion inventories. Directions for the inventories ranged eighth grade to college graduate level. The inventory items ranged from seventh to twelfth grade level in difficulty.

GRANT, CARL A., & GRANT, GLORIA W. The multicultural evaluation of some second and third grade textbook readers—a survey analysis. *The Journal of Negro Education*, Winter 1981, *50*, 63–74.

Analyzes three aspects of minority representation—diversity, settings and involvement—in three of the ten most widely used reading textbooks. The textbooks were evaluated by 57 elementary school educators using the scale developed by the

authors called the Multicultural Textbook Survey Evaluation Instrument. It was found that 57% of the stories in the textbooks contained all majority characters and predominantly depicted the middle class in a contemporary setting.

BALDAUF, JR., RICHARD B. Why do educational measurement texts omit the cloze procedure? *Educational and Psychological Measurement*, Winter 1980, *40*, 931–938.

Examines 39 textbooks in educational measurement to determine what they say about constructing and using cloze procedures. A frequency of citation was obtained for cloze procedure and the related term, readability. In addition, a frequency of citation was determined for essay tests, multiple-choice tests, intelligence tests, and sociometric techniques. The index of each text was used to determine frequency of citation. The authors also searched each of these five topics in *Resources in Education* (RIE) and the *Current Index to Journals in Education* (CIJE) for 1970–78 inclusive. The term cloze was referenced in only one text whereas the other four terms were referenced in 14 to 39 texts. In CIJE and RIE, however, cloze was the second and third most frequently cited of the five topics.

WALFORD, GEOFFREY. Sex bias in physics textbooks. *The School Science Review*, December 1980, *62*(219), 220–227.

Conducts a content analysis of the pictures in a variety of British physics textbooks for the purpose of showing that such texts present a clear masculine image, which in turn discourages girls from entering physics courses. The analysis of the pictures indicated a predominance of males. Concludes that if it is desired to increase the number of girls enrolling in physics, then physics texts should present a more balanced image of men and women in the textbook illustrations.

KOENKE, KARL. The careful use of comic books. *The Reading Teacher*, February 1981, *34*, 592–595.

Cites research on the use of comic books for reading instruction. The literature is discussed under the topics of Selection and Instruction. Information under Selection has to do with readability levels and content analysis of comic books. Under Instruction, the author refers to, among other things, information on writing style of comic books and specific techniques of narrative prose which can be found in them.

V-10 Teaching—grouping

VIGNOCCHI, NELLO. What research says about the effect of class size on academic achievement. *Illinois School Research and Development*, Spring 1981, *17*(3), 51–54.

Reviews selected research on the relationship between class size and academic achievement. The author points out the inconsistency of the research findings and notes that this will continue unless better experimental designs are utilized. It is also stated that working definitions of large and small classes need to be established or else class size intervals with upper and lower limits should be identified.

MARTIN, JEANNE; VELDMAN, DONALD J.; & ANDERSON, LINDA M. Within-class relationships between student achievement and teacher behaviors. *American Educational Research Journal*, Winter 1980, *17*, 479–490.

Reports further analyses of a large data base in which information was collected on teachers' interactions with individual pupils in reading groups in grade one. For this analysis, the final data base consisted of 15 classes, 41 reading groups

and 288 pupils. Of the 15 classrooms, nine were treatment classes and six were controls. Treatment classes were taught by teachers who had agreed to apply a model containing 22 principles of small group instruction. Observers collected data using an observational coding system. The *Metropolitan Readiness Test* was administered at the beginning of the school year. The variables reported on in this article included: selection of pupil, questioning by the teacher, pupil's answer, and teacher's response to the answer. Three levels of analysis were done: class, reading group within class, and pupil within reading group. When class means were used as the level of analysis, achievement was related to 1) higher levels of correct answers, 2) greater use of new questions following correct answers, and 3) less use of giving the answer when a pupil failed to respond. When reading group was the level of analysis, the same three factors were related to higher achievement plus a fourth: groups in which the teacher selected pupils more often by calling on non-volunteers in a random fashion had lower achievement. Results at the pupil analysis level suggested that the teacher's different treatment of pupils within a group was related to the different achievement of those pupils. At this level, the results suggested that the pupils who had more successful interactions, who were asked more nonreading questions, and who were more often given chances to improve incorrect answers tended to achieve more.

HAYES, JR., ROBERT KENNETH, & DAY, BARBARA D. Classroom openness and the basic skills, the self-perceptions, and the school-attendance records of third-grade pupils. *The Elementary School Journal*, November 1980, *81*, 87–96.

Investigates the relationship between the degree of classroom openness and the basic skills, self-perceptions, and school attendance records of 1,648 grade three pupils in 96 classrooms in 18 North Carolina elementary schools. Classroom openness was determined by scores on the *Walberg-Thomas Classroom Openness Observation Rating Scale* and the parallel Teacher Questionnaire. The *Iowa Tests of Basic Skills*, Level 8, were used to assess vocabulary, reading comprehension, spelling, capitalization, punctuation, language usage, mathematics concepts, and mathematics problems. Self-perceptions were assessed by the Primary Level of the *Self-Observation Scale*, a 50-item instrument including five dimensions of affective behavior. Additional demographic type information was obtained about teachers and pupils. Classrooms were observed for at least two hours on two separate occasions by two different observers and rated on the openness scale. Regression analyses revealed no significant relationships between the degree of classroom openness and any of the basic skills, the self-perceptions, or the attendance records.

HALLER, EMIL J., & DAVIS, SHARON A. Does socioeconomic status bias the assignment of elementary school students to reading groups? *American Educational Research Journal*, Winter 1980, *17*, 409–418.

Assesses the role of socioeconomic status and measured reading achievement as determinants of reading group assignment in the elementary school. Two additional purposes were studied: 1) the degree of SES segregation resulting from grouping based on teacher judgment compared with grouping based on test results only, and 2) the influence of teacher SES on classroom segregation by ability. Data were collected in 37 grade 4, 5, and 6 classrooms in five schools in four separate districts (N = 963). Percentile scores on the reading comprehension section of the *Iowa Test of Basic Skills* and a measure of SES were collected. Teachers were asked to sort children into three groups for reading placement. Using Iowa scores and SES scores, two hypothetical groupings were formed for each classroom to parallel the teacher-assigned groups. Reading group and SES group corresponded in slightly less than 50% of the cases. Little support was found for the argument that SES would have as strong a relationship to reading group assignment as would test scores. The effect of measured reading

ability was found to be more powerful than home background in assignment to reading group. Instructional grouping based on teacher judgment created greater socioeconomic segregation than grouping based on achievement test scores alone. Teachers' backgrounds were not related to the amount of social class segregation in their classrooms.

SIMPSON, CARL. Classroom structure and the organization of ability. *Sociology of Education*, April 1981, *54*, 120-132.

Examines the effects of classroom organization on the conception of academic ability held by pupils. Six schools containing 16 third-grade classes participated. A total of 287 pupils completed questionnaires related to their own academic self concept as well as how they viewed their peers academically. Based on teachers' reports, classrooms were divided into eight unidimensional and eight multidimensional classes. In unidimensional classes, teachers reported 1) using one set or two or three sets of materials, mostly ordered by ability levels; 2) seldom or never allowing pupils autonomous choice of materials or timing of work; 3) grading work always or usually; and 4) using instructional media other than formal English once a week or less. In multidimensional classes, teachers reported 1) individualizing materials or providing multiple sets on a given subject; 2) using nonlanguage media frequently, 3) often or usually allowing pupil autonomy, and 4) seldom grading pupils' work. Pupils' self-reported ability levels in school work, arithmetic, reading, and social studies showed greater dispersion in unidimensional classes than in multidimensional ones, although the difference was significant only for school work. Unidimensional classes had a higher proportion of pupils reporting ability levels below average and far below average. Pupils were asked to identify the three best and three worst performers in social studies and arithmetic. While concensus was higher in unidimensional classes, it tended to be high in boty types of classroom. Correlation coefficients between teacher ratings and peer ratings of pupils in math was .76 in unidimensional classrooms and .51 in multidimensional classes. For social studies, the corresponding figures were .67 and .51.

SCHOLOM, ALLAN; SCHIFF, GLORIA; SWERDLIK, MARK E.; & KNIGHT, JEFFREY. A three year study of learning disabled children in mainstreamed and self contained classes. *Education*, Spring 1981, *101*, 231-238.

Reports on the data collected in the third year of a longitudinal study of mainstreaming with learning disabled children. Subjects were 29 learning disabled children, 14 in mainstreamed (MS) classes and 15 in two self-contained (SC) special education classrooms. The age range in SC group was 8-0 to 13-9, and in the MS group, 9-4 to 12-6. Data gathered included word identification, spelling, and math subtest achievement scores on the *Wide Range Achievement Test* (WRAT) or *Peabody Individual Achievement Test* (PIAT); and ratings of personal, social, and academic adjustment from teachers, parents, and children. Parent questionnaires were returned by four SC and eight MS parents. Teachers of both groups reported improvements in social adjustment for children between their second and third year, but teachers noted a decline in achievement in the MS group. Children in both groups reported a decline in their social, personal, and academic achievement; parents of both groups also reported a decline in personal and academic adjustment but only parents of MS children reported a decline in social adjustment. No statistically significant differences were found for any of the achievement subtests between the two groups. However, over the three years, there were trends indicating that the SC pupils performed slightly better than the MS pupils.

V-11 Corrective and remedial instruction

RENNIE, EWEN F. N. The West Riding screening six years on. *Educational Research*, November 1980, *23*, 47–56.

Follows-up those children after six years who had been identified by a screening of top infant age pupils for educational and related handicaps carried out by the West Riding Authority in England. The West Riding Screening was a two-stage process involving systematized observation followed by selective diagnostic testing including the *English Picture Vocabulary Test I*, the *Burt Word Reading Test*, and a *Copy Designs Test*. On the basis of the test results, children had been divided into an individual testing group, a remedial help group, a follow-up group, and a no further action group. Three follow-up criteria were employed in the study: 1) Raw score on the *Graded Test of Reading Experience* at age 13-plus; 2) Referal to the school psychological service; and 3) Placement in some form of special educational provision.

CRAKER, GEORGE, & RICHARDSON, JIM. Helping poor readers in the primary school: a study of a cross-grade tutoring, read-along approach. *Australian Journal of Reading*, *4*, March 1981, 12–17.

Carries out an exploratory study using a combined read-along, cross-grade tutoring approach over a six months period in a large Australian metropolitan primary school. Subjects were 60 below average readers selected on the basis of scores on the *ACER Reading Survey Test*, Comprehension, and teacher judgment. Pupils were assigned on a random basis to three experimental groups and a control group. Groups met for 20-minutes daily for 12 weeks. Tutors in two of the experimental groups were normal reading volunteers in their sixth year in school. The control and one experimental class used no cross age tutoring. The no cross tutoring experimental group (Group 3) followed along in books as they listened to tape recorded stories. In Group 1, tutorial pairs selected a short book and read it, with the tutor acting as a model. In Group 2, the tutor aided the poor reader without using the read-along approach. Criterion measures were the *Gap Test*, a cloze test, speed of reading score, and a miscue analysis score which balanced good miscues against total miscues. Alternative forms of the criterion measures were administered before, half way through, immediately after, and 12 weeks after treatment. Only pretest and 12 weeks delayed test scores were presented in the article. Comparisons tended to favor the cross grade/read-along experimental group although the differences were not significant.

BLANCHARD, JAY S. A comprehension strategy for disabled readers in the middle school. *Journal of Reading*, January 1981, *24*, 331–336.

Delineates the procedures of a supplemental remedial strategy to be used with middle school age disabled readers and reviews the findings of two research reports supporting its use.

FAYNE, HARRIET R., & GETTINGER, MARIBETH. Narrowing the gap between research and practice in sight word reading instruction. *Psychology in the Schools*, April 1981, *18*, 240–245.

Describes a program designed to bridge the gap between educational research and practice using 37 resource teachers of the learning disabled. Researchers disseminated findings and gathered additional field data on teaching sight words to learning disabled children while the teachers, who were divided into three experimental groups, were given training and materials for a one-week teaching procedure to be used with

children in their classes. Instructional packets differed in the number of sight words presented at one time (5 + 5 vs 10) and the use of reduced response competition, that is, temporarily dropping words from list practice as they are learned. Teachers from all three treatment groups taught the same words. In all conditions, techers collected data on the number of trials needed to reach criterion for each word across three practice rounds. Results showed that overall posttest performance did not differ among the groups; however, pupils taught using reduced response competition required fewer trials to reach criterion on each word.

WYNE, MARVIN D., & STUCK, GARY B. Time-on-task and reading performance in underachieving children. *Journal of Reading Behavior*, Summer 1979, *11*, 119–128.

Investigates the influence of a three phase time-on-task eight week classroom program using a point system of variable intervention behavioral reinforcement in individual study tasks upon time-on-task reading performance of elementary pupils who were one or more years behind in reading achievement and with low time-on-task classroom performance. The ten subjects for each group were drawn from and matched with controls at the second-third and fifth-sixth grade levels of two schools: an upper and a lower socioeconomic division. Significant improvement for regular classroom time-on-task performance ($p < .001$) was evidenced immediately after the eight week program and was maintained throughout the follow-up, sixteen weeks later.

MCLAUGHLIN, T. F.; CADY, MONEDA; & BEMENT, GEORGE. Effects of the behavioral analysis model of follow-through on the reading and arithmetic achievement by native American elementary school children. *Psychological Reports*, October 1980, *47*, 403–407.

Compares, for kindergarten through grade three, the achievement scores of 22 cohorts of Native Americans who were systematically taught through a variety of approaches and the scores of poverty and minority urban and rural children on the *Wide Range Achievement Test*, reading and math. Cohorts ranged in size from 2 to 71. The results indicated that 18 out of a possible 22 cohorts scored at or above grade level in arithmetic. In contrast, comparison children were below grade level in reading and math.

GUTHRIE, JOHN T. Social interaction of reading groups. *The Reading Teacher*, November 1980, *34*, 252–253.

Cites results from the Kamehameha Early Education Program (KEEP) in Honolulu where a new reading program was introduced. Pupils in the program are randomly selected from a group of children who scored below the second stanine in reading achievement. After introduction of the new program, reading achievement scores improved to about the 50th percentile. Results of another study in which one videotaped reading lesson was studied are reported. The analysis suggested that the program blended familiar patterns of social interaction and the formal school organization.

SCHUSTER, DONALD H., & VINCENT, LOIS. Teaching math and reading with suggestion and music. *Academic Theory*, September 1980, *16*, 69–71.

Uses the Suggestive-Accelerative Learning and Teaching (SALT) method along with music to teach math and reading to ninth-grade students with learning disabilities. Music was used at the beginning and end of the class to relax and calm students as well as in other ways. Grade equivalent scores on the *Key Math* test and the *Woodcock Reading Test* were collected for nine students. The *Brooks Student Questionnaire* (BSQ) was given to 11 students. The average math gain for the year was 1.4 years; in reading, the gain was 2.2 years. The BSQ showed better student-teacher affective relationships at year-end than in September.

FISHER, DENNIS F. Compensatory training for disabled readers: research to practice. *Journal of Learning Disabilities*, March 1980, *13*, 134–140.

Reviews research directed at identifying perceptual and cognitive components in reading and their dysfunction in disabled readers. Reading disability is discussed as a disruption in the processing sequence. The article provides a compensatory training technique for teaching sight vocabulary, proposed as a means of reacquainting the reader with the rewards of text and normalizing the oculomotor system.

HARRIS, ALBERT J. What is new in remedial reading? *The Reading Teacher*, January 1981, *34*, 405–410.

Surveys developments in remedial reading, particularly the new developments in treatment in the areas of medical, psychological and educational therapies.

LEE, COURTLAND C. The homework helper program: volunteer service for academic and social enrichment in the elementary school. *The School Counselor*, September 1980, *28*, 11–21.

Discusses and evaluates a tutoring program designed to aid low socioeconomic urban children with their study habits and classroom achievement. Subjects were 35 third-, fourth-, and fifth-grade pupils who met the criteria for federal compensatory education programs. Each child selected was matched with a control on age, grade level, achievement test scores, and teacher evaluation. Children were assigned randomly to a tutoring or control program. Tutors were 20 volunteer junior- or senior-year college students. They were given training in tutoring consisting of seven training modules over eight weeks and also received periodic workshops over the course of the program. Children worked with the tutor in small groups for two hours twice weekly. Three instruments were used to evaluate results: the Reading and Mathematics subtests on the *Stanford Achievement Tests*; the *Piers-Harris Children's Self-Concept Scale*; and the *Devereaux Elementary School Behavior Rating Scale*, a scale on which the teacher ranked pupils on 47 different behaviors. Pre and post measures were collected for all children. No significant differences were found for reading or arithmetic achievement or for self-concept scores between the two groups. Teacher ratings of classroom behavior favored the tutored group.

EISENBERG, THEODORE; FRESKO, BARBARA; & CARMELI, MIRIAM. An assessment of cognitive changes in socially disadvantaged children as a result of a one-to-one tutoring program. *The Journal of Educational Research*, May/June 1981, *74*,311–314.

Reports the findings of a two-year evaluation study of the Perach Project, a one-to-one tutoring program in Israel that matches university students with children from socially disadvantaged backgrounds. The report presented the results on children in grades five through seven. Achievement tests were developed to assess mathematics, reading comprehension, and English as a foreign language skill. Tests were multiple-choice in nature and varied from 22 to 32 items in length and were administered on a pre- and posttest basis. Three groups of children were compared: 1) an experimental group receiving tutoring (N=418), 2) a control group (N=343), and 3) a dropout group of children who dropped out early in the program (N=43). Experimental children outperformed the other groups in reading only.

WALLACH, MICHAEL, & WALLACH, LISE. Helping disadvantaged children learn to read by teaching them phoneme identification skills. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *3*, 197–215.

Describes a tutorial program used with inner-city children in Chicago and presents evaluation data on it. The program, based on research findings, emphasized phoneme identification skills and utilized tutors. Subjects came from 98 first- and

second-grade children scoring within the bottom 40% on the *Metropolitan Readiness Tests*. A random subset of these children were tutored by community adults. After about 30 weeks of tutoring, a battery of both standardized and researcher developed tests was administered. On a word recognition test, the mean score for tutored children was 150 words; for control children, the mean was about 50 words. Out of a possible maximum score of 25 on a sentence comprehension reading test, experimentals had a mean score of 19.5 and controls, half that.

WHITTAKER, JEWELEANE W. Reading comprehension of nonstandard dialect speakers improved by the use of linguistic principles. In Gwyn Enright (Ed.) *Proceedings of the Thirteenth Annual Conference of the WCRA* (Western College Reading Association), 1980, *13*, 76–83.

Assesses the effect of a linguistically based instructional program on reading comprehension scores of black nonstandard dialect speakers. Subjects, 200 beginning freshmen enrolled in eight sections of a reading study skills course, were randomly assigned to either a linguistics or a conventional instruction group. The conventional group used a basic text supplemented with readings and activities. In the experimental group, instruction was based on linguistics principles. Classes met for 50 minutes twice a week for 16 weeks. Alternate forms of the *Nelson-Denny Reading Tests* were used to evaluate growth. No significant differences were found between the two groups for total change scores or vocabulary scores on the Nelson-Denny. The linguistics group improved significantly more than the conventional group in comprehension, however.

RAIM, JOAN. Who learns when parents teach children? *The Reading Teacher*, November 1980, *34*, 152–155.

Relates the results of a reading club consisting of parents and children from the two lowest functioning classes in grades two and three in an innercity school. Hispanic families constituted 85% of the sample. The club met weekly for two hours throughout the school year. In the first hour, parents were helped to construct instructional devices appropriate for their children and practiced their use. In the second hour, parents used the devices with their children under supervision of the school reading teacher. Attendance early in the year averaged 20 parents, but by the spring there were only 10 regularly attending. Inspection of standardized test scores at the end of the year indicated that half of the children were closer to grade level than when the program started and that specific skills had improved. Additionally, teachers reported positive shifts in motivation for reading. Responses to a parent questionnaire indicated that they felt their own reading skills had improved.

NOBLE, ELEANOR F. Self-selection: a remedial strategy for readers with a limited reading vocabulary. *The Reading Teacher*, January 1981, *34*, 386–388.

Summarizes results of a small-scale study using a self-selection strategy with 16 remedial readers. Children were reading two years below expectancy level. A record was kept of all errors made while a pupil read orally a selection of 100 to 200 words in length. From the list of errors, pupils selected a few they wished to learn and the tutor selected an equal number from the same list. All words were then taught in a mixed order for approximately 10 to 20 minutes. At the beginning of the next session, the pupil, without review, read orally the original passage while errors were recorded on the previously selected words. Results were compared between teacher-selected and pupil-selected words. Of the total of 150 words, pupils recognized 44 of the teacher-selected words and 59 of the pupil-selected ones. Eleven of the 16 pupils learned more of the pupil-selected then of the tutor-selected words, while five children learned an equal number of each.

BUILDER, PHILIP. Involving parents of poor readers. *Australian Journal of Reading*, November 1980, *3*, 212–219.

Reports and evaluates the procedures used in one Australian school to involve parents of reading disabled children in their child's remedial reading program. Thirty-six families were regularly represented at meetings which ran for one hour each fortnight from March through August. At the conclusion of the program, questionnaires were sent to parents evaluating the program. Responses were returned by 33 of the 36 families. The responses showed that 79% of parents felt that their children's attitude towards reading had improved and 70% noted an improvement in general school work. The program was reported effective in improving the reading atmosphere in 52% of the homes. Communication with the school was reported as improved by 2?% of parents. When the effects on children were analyzed, it was found that there was a 50% reduction of remedial teaching time over the previous year. Of the 60 children who began the remedial program 25 improved enough to return to their regular classrooms.

WANG, MARGARET C. Mainstreaming exceptional children: some instructional design and implementation considerations. *The Elementary School Journal*, March 1981, *81*, 195–221.

Presents data from a pilot case study describing classroom processes and pupil learning outcomes of a mainstreaming program implemented in a multi-age primary classroom. The class consisted of 45 children, ages five through eight, two teachers, and one instructional aide. In the pupil population were four low achievers whose achievement test scores were at or below the 25th percentile and eight high achievers with achievement test scores at or above the 19th percentile. Descriptive information on how pupils spent their classroom time and teacher-pupil interactions were obtained using the *Student Behavior Observation Schedule*. Six sets of observations were collected on each pupil between February and June. In addition records on the number and types of tasks assigned by teachers and completed by pupils were maintained. Pupil achievement data during attendance in the mainstreaming class were collected using reading and math scores on the *Metropolitan Achievement Test* (MAT). Achievement data after graduation from the mainstreaming program were based on reading and math scores on the *Iowa Test of Basic Skills*. On the MAT, the mean of pupils in reading in the mainstreamed program was over a year above national norms at both first grade and second grade. At grade one, the reading score mean for mainstreamed pupils exceeded that of other first graders in the school; at grade two, those who had been in the program the previous year equalled the mean in reading of other grade two pupils in the same school. Math scores tended to be similar to reading scores. When pupils were followed into the middle grades, means in both reading and math of children from the mainstreamed class exceeded those of pupils who had attended regular classrooms in the primary grades. While 76% of all teacher interactions with high achievers (N = 8) were for instructional purposes, only 52% of interactions with low achievers (N = 4) were for instructional purposes. The management interactions percentage was 47 for low achievers and 13 for high achievers. Lower achievers initiated fewer contacts than expected with teachers compared to contacts initiated by high achievers. Low achievers tended to work on assignments by themselves, whereas high achievers worked in individual settings only 29% of the time.

PRICHARD, ALLYN, & TAYLOR, JEAN. A demonstration of the concept "hyperlearning." *Journal of Learning Disabilities*, January 1981, *14*, 19–21, 47.

Describes a remedial reading program and presents evaluative data on a total of 18 participants diagnosed as having a learning disability (LD). Data were collected

for four separate groups, each having a one-semester program of instruction. Results were reported using pre- and post-test scores on the Oral and Silent Reading Subtests and the Word Recognition Subtest of the *Spache Diagnostic Scales*. Fifteen of the 18 LD pupils showed a gain of a year of more in oral reading and 16 of the 18 showed a similar growth in silent reading. In word recognition, seven pupils gained a year or more.

BATEMAN, BARBARA. Teaching reading to learning disabled and other hard-to-teach children. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *1*, 227–259.

Describes four approaches to teaching reading to learning disabled or reading disabled pupils and reviews research related to each method. The four methods discussed were: etiological, diagnostic-remedial, task-analytic and a combination of task-analytic programming and research on the learning processes of learning disabled children.

ITO, H. RICHARD. After the resource room—then what? *Academic Therapy*, January 1981, *16*, 283–287.

Studies, after they had returned to the regular classroom full-time for one year the reading, spelling and arithmetic achievement gains made by 62 learning disabled children who had previously received part-time resource room help. The subjects were 42 male and 20 female urban students from lower to upper middle income families. The range of IQ scores for the pupils was 70 to 130. Achievement was assessed with the *Wide Range Achievement Test*. The greatest achievement gains were found while children were enrolled in the resource room, although they did make near normal achievement gains upon returning to the regular classroom.

HORNSBY, BEVÉ, & MILES, T.R. The effects of a dyslexia-centered teaching programme. *British Journal of Educational Psychology*, 1980, *50* Part 2, 236–242.

Studies the effects on reading achievement of reading instruction presented to 107 dyslexics in three dyslexia centered reading programs. Subjects were 107 dyslexic children with IQs (source of scores not indicated) ranging from 95 to 120 or above. Their average CA was 10-7, and their average reading age was 8-11. All attended one of three dyslexia centers in Great Britain. Though the clinics did vary, they all based their instruction on considerable structure in which the teaching (primarily phonics) is sequential and cumulative. Reading was assessed before and after instruction with the *Neale Analysis of Reading Ability*, the *Schonell* R_1 word recognition test, and the *Schonell* R_2 spelling test. The average length of instruction was 20 months. The average rate of reading growth per year of school before remedial instruction was .53 (i.e., approximately five months growth for every 10 months of school); during remedial instruction it was 1.91.

STEIN, CLAUDIA L'E., & GOLDMAN, JACQUELIN. Beginning reading instruction for children with minimal brain dysfunction. *Journal of Learning Disabilities*, April 1980, *13*, 219–222.

Compares the effects of two reading programs on primary-age children with minimal brain dysfunction. The two programs were DISTAR and the Palo Alto Reading Program. Subjects were 63 children of average intelligence between the ages of six and eight who attended private schools for children with learning problems and who had been diagnosed as having minimal brain dysfunction. The DISTAR group was composed of 26 boys and 4 girls; the Palo Alto group, of 25 boys and 8 girls. Both

groups had spent almost 11 months in their respective programs. In both groups, instruction was for 60 minutes daily in groups of two or three. Final level of reading ability was determined by posttest scores on the *Peabody Individual Attainment Test* (PIAT). The DISTAR group showed statistically significant higher mean score on the combined Reading Recognition and Reading Comprehension subtests of the PIAT. Both groups showed progress in reading.

NEVILLE, DONALD D., & HOFFMAN, RUDOLPH R. The effect of personalized stories on the cloze comprehension of seventh grade retarded readers. *Journal of Reading*, March 1981, *24*, 475–478.

Hypothesizes that personalizing story material will increase cloze comprehension scores of retarded readers in seventh grade. Subjects were 58 pupils who had a stanine score of three on the *Metropolitan Achievement Tests* administered in sixth grade. Children were assigned randomly to either the experimental or control group. Two forms of a short story, one personalized and one nonpersonalized, were written for the study. The forms were identical except that the personalized form contained 68 words of immediate relevance to the reader such as his name and the names of people and places familiar to him. Cloze forms were constructed for both forms of the story with 50 deletions and an every eighth-word deletion pattern. Children first read an unmutilated form and then the cloze form of the story. Responses were scored according to an exact word replacement criterion, but pupils were not held to correct spelling. Raw scores for the two groups were compared. The experimental group mean was significantly greater than the mean of the controls.

JORM, A. F. Children with reading and spelling retardation: functioning of whole-word and correspondence-rule mechanisms. *Journal of Child Psychology and Psychiatry*, April 1981, *22*, 171–178.

Identifies 19 controls, 19 children retarded in both reading and spelling, and 4 children retarded in spelling only and administers a series of tasks designed to assess two components of the reading and spelling process. All children in grades four to six of two Victorian State Schools in Australia, were administered the *GAP Reading Comprehension Test*, the *Schonell Graded Word Spelling Test*, and the *ACER Junior Non-Verbal Test*. Using CA, IQ, and reading age (RA), predictions were made of each child's spelling age. Children falling two standard errors below predictions on their actual spelling age were designated as spelling-only retardates. Reading-plus-spelling retardates had reading and spelling scores two standard errors below prediction. Six tests were used to assess spelling and reading. The tests were designed to assess the ability to read and spell using correspondence rules and the ability to read and spell at a whole-word level. Reading-plus-spelling retarded children were deficient in the ability to read and spell using rules. Their achievement in whole word reading and spelling of irregular words was also deficient, although they did as well as controls on symbol-word association. Because of the small number of children retarded in spelling, only tentative conclusions could be reached concerning their performance.

V-12 Teaching—bilingual

WEBER, ROSE-MARIE, & SOLA, DONALD F. Developing instructional materials for a bilingual education program in the Peruvian Andes. *The Reading Teacher*, December 1980, *34*, 296–302.

Describes a bilingual program developed for children in Peru who speak Quechua as a mother tongue and presents evaluative information on its effectiveness.

The problems in developing materials and a curriculum in the Quenchua language are discussed. Evaluation was carried out throughout the program as well as at the end of the first year of experimentation in classrooms. Although test data are not reported, data on observation of children and teachers' reactions tended to be positive. A notable problem was the neglect of Spanish as a second language.

COHEN, S. ALAN, & RODRIQUEZ, SAMUEL. Experimental results that question the Ramirez-Castaneda model for teaching reading to first grade Mexican Americans. *The Reading Teacher*, October 1980, *34*, 12–18.

Compares a direct reading instruction approach with an approach that caters to Mexican-American cultural learning styles in a study of 150 low socioeconomic Mexican-American first graders who werre randomly assigned to one of two treatment groups in six classes. Pupils who were dominantly non-English speaking were not included. Lessons consisted of instruction in 18 selected objectives in a commercially published competency-based reading program. Instruction lasted 20 consecutive school days, 45 minutes daily. Dependent variable was the Reading Comprehension subtest of the *Comprehensive Test of Basic Skills*, Level B given within two days after treatment and readministered two weeks later. Data analysis on main effects by treatment, sex, teacher, and total on immediate as well as delayed test of silent reading comprehension produced results that consistently favored the children who were taught by direct reading instruction to precise behavioral objectives. On sex comparisons, females outscored males.

BINIAKUNU, DIANZUNGU DIA. Learning to read Kikongo: a primer makes a difference. *The Reading Teacher*, October 1980, *34*, 32–36.

Evaluates the effectiveness of a Kikongo language primer used in 12 first-grade classes in one town in Western Zaire. A three-group design was employed: 1) classes who used the primer and whose teachers received inservice training, 2) classes using the primer only, and 3) classes using another primer. The dependent variable was reading ability in Kikongo as assessed by a writer-developed test. Inservice training was conducted one day prior to the opening of the school year; instruction was conducted for two 30-minute daily periods over a three-month period. The inservice group scored higher than the other groups and the group using the new primer only scored higher than the group using the older primer.

CHAN, JIMMY. A crossroads in language of instruction. *Journal of Reading*, February 1981, *24*, 411–415.

Compares the performance of graduates of three Anglo-Chinese secondary schools in Hong Kong with that of students who attended three Chinese Middle schools. In the former, the language of instruction is English; in the latter, Chinese. Additionally, a Likert 5-point scale questionnaire, developed to investigate the reasons for differences in performance in the two types of schools, was sent to 900 teachers who had taught in both types. An attempt was made to match the types of schools for students' academic standards, teacher qualifications, teaching facilities, school organization, and prestige. Results of 240 Chinese Middle school students and 193 Anglo-Chinese school students were collected in Chinese, mathematics, biology, chemistry, physics, geography, and history. Chinese Middle school students had significantly higher scores in Chinese and mathematics than did Anglo-Chinese students but were significantly lower in biology, chemistry, physics, geography, and history. Teachers believed that internal factors (student interest, ability, academic aptitude, motivation, and socioeconomic background) were most important in accounting for better student performance with lingual factors (Chinese or English as a better medium of instruction

for teaching particular subjects) as next most important. External and social factors were viewed as less important.

PARR, GERALD D.; BACA, FERNIE; & DIXON, PAUL. Individualized versus group instruction in bilingual education: a two-year study. *The Elementary School Journal*, March 1981, *81*, 223–227.

Compares an individualized bilingual education instructional program and a group approach to bilingual education. The 43 children involved in the study were assigned randomly to either a class providing individualized or group bilingual instruction. Individualized pupils had their reading level diagnosed, specific needs identified, and skill practice assigned accordingly. Progress was monitored by means of tests and checklists, and individual lesson plans or contracts were made out for each child. The group approach used traditional methods and activities were carried out in groups of 10 to 15. Both groups were pre- and posttested in the first year of the two-year project on the *Comprehensive Test of Basic Skills* (CTBS); the *Piers-Harris Children's Self-Concept Scale*; the SOBER, a criterion-referenced test of reading and listening in Spanish; and the Spanish version of the *Peabody Picture Vocabulary Test*,. In the second year, the same tests were used except that the SOBER was replaced by the Spanish version of the CTBS. No strong trend in favor of either groups was found.

SANCHO, ANTHONY R. Maintenance and transitional approaches to bilingual instruction: the effects on bilingual children. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Fourth Yearbook*, 1980, 218–224.

Reports on a retroactive longitudinal, three-year comparison of the effects of maintenance and transitional approaches as bilingual treatments on pupil achievement in the areas of language, reading, and arithmetic. Student performance was compared among bilingual pupils who were enrolled continuously in either approach during kindergarten, first-grade, and second-grade years in schools of a Southwest city. Criterion measure was the *Comprehensive Test of Basic Skills*. The maintenance approach used equally the student's first and second languages in the learning process. The transitional approach used the student's first language until skills in English were accomplished. Among the conclusions cited was that the effects of either a maintenance or transitional educational treatment were not as significant on pupil achievement as was the degree of linguistic competence which the bilingual child initially brings to the school setting. In addition, the reports included four other conclusions.

MERRY, R. The keyword method and children's vocabulary learning in the classroom. *The British Journal of Educational Psychology*, June 1980, *50*, 123–136.

Surveys schools in England by questionnaire to find out the status of vocabulary teaching in French classes and conducts two experiments to see if the key word technique could be adapted in a group setting as well as to examine the value of the key word method for children of differing ability. The key word approach involved the association of an auditory link between a foreign word to be learned and an English one with at least a partly similar sound. Questionnaire results of 155 respondents, ages 11-13, disclosed that many teachers expected their pupils to learn and be tested on lists of 10-20 vocabulary items. The subjects in the first experiment were 42 11-year-olds, all of whom had been learning French, and they demonstrated that the key word technique, adapted for group instruction, improved both their immediate and their delayed recall in learning French words. A second experiment indicated that good and poor learners approached vocabulary learning differently when left to their own devices, and further experimental groups confirmed the value of the key word technique for children of various levels of ability.

V–13 Tests and testing

V–13a Factors in test performance

BUTLER, JOHN; SHEINKER, ALAN; & HOFFELT, STEVE. Different response formats and their effect on competency test scores. *Colorado Journal of Educational Research*, Spring 1980, *19*(3), 10–11.

Attempts to find out what effect either writing on separate answer sheets or directly in the response booklet will have on the competency test scores of 17 eleventh graders who had previously failed a high school competency test. Students were asked to answer every third item on the *Senior High Assessment of Reading Proficiency*. The subjects were randomly divided into two treatment groups. Group A was instructed to record answers on a separate answer sheet and Group B recorded their answers directly on the test booklet. The Mann-Whitney U Test analysis revealed no statistically significant differences between the rank order of individuals in Group A and Group B.

JANSEN, MOGENS. Interaction between reading test results and elementary reading programs. *Scandinavian Journal of Educational Research*, 1979, *23*(2), 79-89.

Describes the nature and beneficial function of reading testing and reading research within a Danish school system upon the improvement of teacher-specialist interaction, curricular change, and subsequent improvement of reading performance including reducing the number of pupils with severe reading problems. Presents tabular data revealing changes in reading test modal performance and distribution.

BAMBERG, BETTY, & HAMILTON, BARBARA. Exam preparation strategies of college freshmen. In Gwyn Enright (Ed.) *Proceedings of the Thirteenth Annual Conference of the WCRA*(Western College Reading Association), 1980, *13*, 30-34.

Performs a content analysis on 195 college freshman essay exams to determine the exam preparation strategies students state they use and find effective and their reasons for finding exams difficult. The 195 essays were selected randomly from over 2,000. Students were to identify the most difficult exam they had taken during their freshman year, to explain why it was difficult, to describe the methods used in preparing for it, and to evaluate the effectiveness of their efforts. A classification schema of 22 subcategories and 142 different elements within subcategories was used to code statements on the essays. Exams identified as most difficult included 33 different classes, but the five classes of chemistry, biology, psychology, economics, and math accounted for 52% of the total classes cited as having difficult exams. The 412 statements giving reasons for exam difficulty were classified into four subcategories: 1) student's own characteristics or behavior (46%); 2) content of the exam (37%); 3) exam format (8%); and 4) professor (8%). In the first subcategory, 43% of the 190 statements indicated that poor study skills were at fault. In the second category (content of the exam), 47% of the 141 statements reported that the extensive reading required by a class and or the cumulative nature of the exam created difficulty and 18% cited the difficulty of the subject or assigned reading. In preparing for an exam, only 4% of the 771 statements indicated the use of study aids. Specific techniques mentioned included memorization (14%), making up practice questions or redoing old problems (14%), rereading part or all of the assigned material (11%), and making up study sheets or flash cards (11%). Study marathons in which students studied 10-12 hours a day for periods ranging from one day to two weeks before the exam were identified in 27% of the statements.

KALECHSTEIN, PEARL; KALECHSTEIN, MEL; & DOCTER, ROBERT. The effects of instruction on test-taking skills in second-grade black children. *Measurement and Evaluation in Guidance*, January 1981, *13*, 198–202.

Ascertains the effect of instruction on test-taking skills of black second-grade children in a Title I school. The 43 pupils were randomly assigned to either an experimental or a control group. The pretest was the *Cooperative Primary Reading Test*. The post-test was the *Stanford Achievement Test*, and it was administered to both the experimentals and controls after the experimental treatment. The experimental group was taught to follow verbally administered directions, to mark responses, and to use a time-saving and a guessing strategy in two 30-minute lessons per week for five weeks. Analysis of covariance of mean scores on post-test measures favored the black pupils who were taught test-taking techniques.

BERGMAN, IRWIN B. Can students be taught to read and take tests more effectively. *Reading Improvement*. Winter 1980, *17*, 256–259.

Reviews the literature on taking tests effectively and reports that formal instruction on test-taking strategies has been generally effective with individuals ranging from pre-kindergarten through the high school level.

LANGE, BOB. Promoting test-wiseness. *Journal of Reading*, May 1981, *24*, 740–743.

Cites recent literature on the value of teaching test-wiseness and what test-taking skills should be taught in the schools.

NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION. Florida's test: a limit to learning? *Education USA*, May 4, 1981, *23*, 284.

Comments on how the Florida functional literacy test may lead to better achievement in basic reading but less learning of higher level skills.

V–13b Predictive studies

SMITH, WILLIAM EARL, & BECK, MICHAEL D. Determining instructional reading level with the 1978 Metropolitan Achievement Tests. *The Reading Teacher*, December 1980, *34*, 313–319.

Seeks to validate the 1978 *Metropolitan Achievement Test* (MAT) for determining instructional reading levels. Tested were 700 children from eleven first-grade classes and seven classes each for second, third, fourth, and sixth grades. Each subject took three tests: the reading tests of the MAT, one of three placement tests for a basal series, and the passages from the MAT administered as cloze tests. In addition, selected pupils were administered two standardized informal reading inventories (IRI) to compare the instructional reading level scores with the estimates of the other standardized reading measures. Findings showed that the MAT estimates of independent reading level were about a year lower on the average than the placements of the instructional reading level as determined by the standardized IRI for the same students. Intercorrelation coefficients among the estimates for the MAT with the cloze MAT, the basal placements, and IRI are .87, .85, and .89, respectively.

ROGERS, C. D. Forecasting the instructional reading level. *Reading Improvement*, Summer 1980, *17*, 94–96.

Analyzes eight variables by a step-wise multiple regression procedure to ascertain the factor that best predicts the reading levels of 180 elementary-age subjects

who were referred to a university clinic for reading diagnosis. The dependent variable was a commercial informal oral reading inventory, and the seven independent variables consisted of the Bender-Gestalt, the *WISC* Full Scale IQ, *Survey of Basic Phonic Principle Applications*, and two visual attention span and two auditory attention span subtests from the *Detroit Tests of Learning Aptitude*. In each sample of grade 3, 6, and 9 subjects, phonics was found as the best single predictor of the instructional reading level. The percentage of variance explained by phonics varied from 48% to 68% of the variance. Beyond phonics, the variables found at each grade level were not the same.

BROWN, LINDA L., & SHERBENOU, RITA J. A comparison of teacher perceptions of student reading ability, reading performance and classroom behavior. *The Reading Teacher*, February 1981, *34*, 557–560.

Explores the relationship between teachers' opinions of their pupils' academic performance and actual test scores and clasroom behavior. The 240 grade two, three and four children in the study were given the *Test of Reading Comprehension* (TORC) and the *Stanford Diagnostic Reading Tests* in October. Their teachers completed the Teacher Rating Scale of the *Behavior Rating Profile* (BRP) for each child and also were asked to rank order them on reading ability. Teachers' listings were divided into thirds in terms of reading ability. Pearson product-moment correlation coefficients were computed between teachers' ratings and the Stanford subtest scores, the TORC subtest scores and reading comprehension quotient, and the BRP. Most of the coefficients associated with the two reading tests fell in the .20s and .30s with the range from .11 to .66. The coefficients between the teachers' listings and the BRP were .91, .89, and .92 for grades two, three, and four, respectively.

FOX, BARBARA, & SIEDOW, MARY. Do students understand the teacher? *The Clearing House*, November 1980, *54*, 101–104.

Obtains written directions for the completion of assignments and examinations from teachers in four content areas in order to study the ability of 168 high school students to read and understand the directions. Teacher-written directions were unedited and included area vocabulary and symbols. In all, 40 items were arranged randomly with the provision that no two items from a given content area appeared in succession. For each direction, one 5-multiple-choice question was used to determine if students understood the kind of response expected by the teacher. Each student received a score for the total number correct out of 40 as well as for the total correct within each content area. This score was compared with reading competence as measured by the *California Achievement Test*. A two-way analysis of variance comparing level of reading competence and grade placement with total correct responses on the teacher-written directions showed no significant effect for grade placement. Comparative data indicated that the pattern of performance in individual content areas was similar to the pattern of total performances, with performance improving with increasing reading ability.

BELKA, DAVID E. Prediction of kindergarteners' behavior on Metropolitan Readiness Tests from preschool perceptual and perceptual-motor performances: a validation study. *Perceptual and Motor Skills*, June 1981, *52*, 899–902.

Does a cross-validation study of the prediction of scores on a battery of six perceptual and perceptual-motor tests for performance on the *Metropolitan Readiness Tests* (MRT). A randomly selected sample of 40 pre-kindergarten children were used as the data source. Total MRT score without the fine perceptual-motor copying score was used as the criterion. The optimal predictive battery included scores on auditory

perception, fine perceptual-motor, and gross perceptual-motor tasks and accounted for 50.4% of the variance on the MRT. This was not as high as the prediction level found in an earlier study.

SWANSON, BEVERLY B.; PAYNE, DAVID A.; & JACKSON, BARBARA. A predictive validity study of the Metropolitan Readiness Test and Meeting Street School Screening Test against first grade Metropolitan Achievement Test scores. *Educational and Psychological Measurement*, Summer 1981, *41*, 575–578.

Examines the predictive validity of the *Metropolitan Readiness Tests* (MRT) and the *Meeting Street School Screening Test* (MSSST) in an investigation of 72 and 64 entering first graders of comparable ability as samples who were drawn from an average-sized Southern school district. The criterion measure was the results on the *Metropolitan Achievement Test* (MAT) administered at the end of the school year. Product moment coefficients were calculated between the MAT scores and (a) MRT scales and (b) MSSST subtest scores for each of the two samples. Comparable results were noted for both sets of predictors for both groups with the MRT tending to yield the higher correlation coefficients on the average, particularly when the MAT total reading score was viewed as the criterion.

POLK, CINDY L. HOWES, & GOLDSTEIN, DAVID. Early reading and concrete operations. *The Journal of Psychology*, September 1980, *106*, 111–116.

Compares the performance of 15 early readers with a matched group of 15 nonearly readers on Piagetian tasks of concrete operations. Additionally, the usefulness of the Piagetian tasks for predicting end of grade one reading achievement was assessed. Children were matched for age, sex, and *Peabody Picture Vocabulary Test* (PPVT) scores. All children were given a battery of six Piagetian measures of concrete operations in the third week of school. Early readers were identified by the *Durkin Screening Test* and the *Gates-MacGinitie Reading Tests*, Primary A. In May, all children were given an alternate form of the Gates-MacGinitie (N=28). On the Piagetian tasks, early readers had a mean score of 7.27, and nonearly readers, 5.80. The difference was statistically significant ($p < .05$). Early readers scored significantly higher than nonearly readers on the May testing with the Gates-MacGinitie. A correlation coefficient of .38 was found between the total score on the Piagetian tasks and reading test scores at the end of grade one. The coefficient between PPVT scores and reading scores was .14.

AUSTIN, ROGER G. Success or failure for beginning readers? *Australian Journal of Reading*, August 1979, *2*, 205–210.

Creates a scale of cognitive clarity that included elements to assess children's concept of the reading task, perceptual ability, linguistic competence, and level of cognitive functioning. Preparatory and Year 1 pupils from two Adelaide, Australia, Metropolitan Schools of similar socioeconomic status were tested on the developmental scale. Results showed that children passed through five distinct stages as they develop understanding of the reading process. Six months later, the children were given a standardized test of reading (unnamed). Scores on the developmental scale were correlated with reading test scores resulting in a coefficient of .96.

CIANFLONE, RALPH, & ZULLO, THOMAS G. The relationship of an early measure of intelligence to the ability to learn sight vocabulary words and to later reading achievement. *Educational and Psychological Measurement*, Winter 1980, *40*, 1197–1200.

Correlates performance on the *Slosson Intelligence Test* (SIT) of 108 kindergarteners with their performance on a sight word learning test administered in

kindergarten and reading achievement at the end of first and second grade. After children were administered the SIT, they were individually tested on 63 sight words. No child could read any word. They were then taught the words and tested on them 24 hours later. The number identified was the sight vocabulary score. Three subtests of the *Stanford Achievement Test* (SAT), Reading, Vocabulary, and Work Study Skills, were used to assess achievement at the end of grade one and grade two. Correlation coefficients were as follows: SIT and SAT, first grade, .77 to .87; SIT and SAT, second grade, .61 to .79; and SIT and sight vocabulary score, .70.

DERMOTT, R. ALLAN; PINZARI, STEPHEN J.; ROBERTS, DODD E.; & MCINTIRE, WALTER G. Number knowledge for prediction of specific reading skills and achievement in first graders. *Reading Improvement*, Summer 1980, *17*, 86–93.

Investigates the role of selected reading readiness factors, mental ability, learning ability, and cognitive style as predictors of specific reading skills and achievement for 241 first graders who were randomly selected by sex from seven elementary schools in a New England city. Reading readiness was assessed by the six subtests on the *Metropolitan Readiness Tests* (MRT); mental ability, by the *Otis-Lennon Mental Ability Test*; and field dependence-independence, by the *Portable Rod-and-frame Apparatus* and the Children's *Embedded-figures Test*. The specific reading skills were assessed by the criterion-reference tests taken from the *Metropolitan Achievement Tests*, Restricted Edition, and global reading was determined by the *Metropolitan Achievement Test* in Reading. Stepwise multiple regression analysis indicated that Number Knowledge and Knowledge of Alphabet Letter Names, as measured by the Numbers and Alphabet tests of the MRT, contributed the most variance. Knowledge of Alphabet Letter Names was the best predictor of phonic skills other than vowel recognition and of reading abilities involving words in isolation. Number Knowledge was the best predictor of reading abilities involving words and syntax.

HILL, CHARLES H. A study of test to text transfer of selected decoding skills. *Colorado Journal of Research*, Spring 1980, *19*, 8–9.

Selects randomly 62 second graders and 82 fourth graders from urban and rural school settings to compare reading test performances and actual reading performances in a study of transfer of learning. Subjects were taught with either the Houghton-Mifflin Basal Readers or the Economy Basal Readers. Test data were secured from the Word Identification, Word Attack, and Passage Comprehension subtests on the *Woodcock Reading Test* (WRT) and on the *Gray Oral Reading Paragraphs*. Subjects were ranked high, middle, or low on each of the three subtest scores on the WRT as well as on frequency of phonic usage, context, or sight-words in decoding on the Gray Oral. To determine whether test performance would predict reading behavior, a Chi-square Test was calculated on the data. Findings supported a strong relationship between a test score on decoding skills and usage of these skills. Further analysis suggested that the basal program affected the decoding skill that a child used.

TREMANS-ZIREMBA, MALONIE; MICHAYLUK, JULIAN; & TAYLOR, LORNE. An examination of some predictors of reading achievement in grade four children. *Reading Improvement*, Winter 1980, *17*, 260–266.

Relates reading achievement, vocabulary and comprehension test scores on the *Canadian Test of Basic Skills* to presumed predictor measures for 70 fourth-grade males and 73 fourth-grade females randomly selected from ten Saskatoon schools. Predictor variables consisted of *Piers-Harris* self-concept, birth order, *Lorge-Thorndike* intelligence, sex, family position, family size, age, and SES. Multiple regression analyses revealed I.Q. to be the single major variable associated with vocabulary scores. I.Q. was the best single predictor of reading comprehension with age contributing a modest part of the variance. Sex, SES, family position, and self-concept did not contribute significantly to the multiple prediction.

LEHN, THOMAS; VLADOVIC, RICHARD; & MICHAEL, WILLIAM B. The short-term predictive validity of a standardized reading test and of scales reflecting six dimensions of academic self-concept relative to selected high school achievement criteria for four ethnic groups. *Educational & Psychological Measurement*, Winter 1980, *40*, 1017-1031.

Samples a total of 548 eleventh graders from four different ethnic and cultural backgrounds in a middle-class integrated suburban high school to determine the short term predictive validity of a standardized reading test and of each of six measures of academic self concept. The reading measure was the total score on *The Comprehensive Tests of Basic Skills*. Intercorrelations were found among eight predictor variables and four criterion measures. Stepwise multiple regression analyses were computed for each sample with the high school grade point average (GPA) serving as the dependent variable. Among a variety of findings for the Anglo, Black, and Latino samples, the reading score was the most valid predictor of academic success; and performance on a measure of aspiration was the best indicator of school achievement for the Asian sample. For all ethnic groups, a composite of a reading measure and one of self-concept provided a higher degree of association with high school GPA than did either measure alone.

CRAMER, EUGENE H. Mental imagery, reading attitude, and comprehension. *Reading Improvement*, Summer 1980, *17*, 135-138.

Compares the performance of 124 randomly selected eleventh-and twelfth-grade students obtained on the *Davis Reading Test*, a reading attitude survey, and a questionnaire on mental imagery. A modest significant positive coefficient (.419) obtained between comprehension and attitude scores. A weak positive r (.188) occurred between imagery and attitude which was significant at $p < .036$. No significant correlation coefficient was found between mental imagery and reading comprehension as measured by these instruments.

SCHMECK, RONALD R. Relationships between measures of learning style and reading comprehension. *Perceptual and Motor Skills*, April 1980, *50*, 461-462.

Evaluates the construct validity of the *Inventory of Learning Processes* (ILP) by correlating scores on this inventory with scores on the Vocabulary, Comprehension, and Reading Rates subtests of the *Nelson-Denny Reading Test*. The Brown-Holtzman *Survey of Study Habits and Attitudes* was also administered. Included were 162 students enrolled in a university reading and study skills course. The Synthesis-Analysis scale of the ILP was significantly correlated with vocabulary (.27) and comprehension (.37) scores on the Nelson-Denny. It was not significantly correlated with reading rate (.07). The author concludes that these data support the construct validity of the ILP.

ERWIN, T. DARY, & MILLIKIN, J. LEE. The relationship of the Nelson-Denny Reading Test to the Scholastic Aptitude Verbal Tests. *Measurement and Evaluation in Guidance*, October 1980, *13*, 169-171.

Reviews the verbal sections of the *Nelson-Denny Reading Test* (NDRT) and the *Scholastic Aptitude Test* (SAT) and compares the scores on both tests of 24,000 students who entered a Southwestern university. Correlation coefficients of the SAT with the NDRT scores for combined sexes were moderately high, with the exception of reading rate for the NDRT. The coefficients between the NDRT reading rate and the SAT ranged from .29 to .34. The relationship between verbal SAT and NDRT total was .79.

LOYD, BRENDA H.; FORSYTH, ROBERT; & HOOVER, H. D. Relationship of elementary and secondary school achievement test scores to later academic success. *Educational & Psychological Measurement*, Winter 1980, *40*, 1117-1124.

Investigates the relationship between achievement test scores and academic success of 1,997 high school graduates who entered a Midwestern state university.

Data used were scores on the *Iowa Tests* of *Educational Development* for four years of high school; achievement scores for grades 4, 6, and 8 on the *Iowa Test* of *Basic Skills*; scores on the *American College Testing Program*; cumulative high school GPA; and first semester freshman college GPA. Zero-order correlations were computed. Findings disclosed that coefficients of composite test scores and high school GPA ranged from .42 to .55. A similar range was reported on correlations between freshman college GPA and composite achievement test scores. Subtest scores on reading and GPA's correlated from a low to moderate range of values.

SNOWMAN, JACK; LEITNER, DENNIS W.; SNYDER, VIVIAN; & LOCKHART, LILLIE. Comparison of the predictive validities of selected academic tests of the American College Test (ACT) Assessment Program and the Descriptive Tests of Language Skills for college freshmen in a basic skills program. *Educational & Psychological Measurement*, Winter 1980, *40*, 1159–1166.

Evaluates four Academic Tests of the *American College Test* (ACT) Assessment Program and the *Descriptive Tests of Language Skills* (DLTS) to predict course grades and freshman grade-point average for 496 students enrolled in a basic skills program at a large Midwestern university. Multiple regression analyses indicated that performances in basic skills courses, particularly reading and writing, can be predicted equally well by a subtest of the Academic Tests of the ACT Assessment Program or a subset of the DLTS. Grade point average was predicted equally well with selected subtests from both instruments.

BRENNAN, MARK. "Literacy at the Post-secondary Level: Some Research Findings," *Reading Education*, Autumn, 1980, *5*, 52–53.

Correlates performance of 225 first year college students in Australia on the *Gapadol Reading Test* with their first year Grade Point Average (GPA). The entire first year Teacher Education class of Riverina College of Advanced Education served as the subjects of this study. GPAs ranged from 0.1 to 3.9, and reading age (RA) on the Gapadol ranged from 11.1 to 16.1, 16.1 being the highest RA attainable. An average RA was not presented, but the author reports that most students scored at the top end of the reading test. The correlation coefficient between RA and GPA was .016.

CORDONI, BARBARA K., & SNYDER, MARY K. A comparison of learning disabled college students' achievement from WRAT and PIAT grade, standard, and subtest scores. *Psychology in the Schools*, January 1981, *18*, 28–34.

Analyzes the test results of the *Wide Range Achievement Test* (WRAT) and the *Peabody Individual Achievement Test* (PIAT) to examine the degree of correlation between the scores as well as the equivalency of grade scores and standard scores. Subjects were 16 college students who were enrolled in a learning disability program at a Midwestern university. WAIS scores were used to give an estimate of intelligence. A mean IQ of 112.2 was obtained. Pearson product moment coefficients were computed between scores on the WRAT and PIAT reading and arithmetic subtests. Findings disclosed correlation coefficients of .89 for grade scores for both 1965 and the 1978 WRAT norms reading with the PIAT; .92 and .89 for standard scores on the 1965 and 1978 norms, respectively, with the PIAT reading. Arithmetic coefficients obtained were considerably lower. Using the 1965 WRAT norms, there was no difference between the WRAT and the PIAT grade scores for reading, but the WRAT standard scores were significantly higher than the PIAT standard scores. However, a comparison of scores with the revised 1978 WRAT norms had the effect of reversing the situation; i.e., there was no difference between the standard scores, but the WRAT mean grade rating score was significantly lower than the PIAT mean grade equivalent score.

FERRARI, MICHAEL. Comparisons of the Peabody Picture Vocabulary Test and McCarthy Scales of Children's Abilities with a sample of autistic children. *Psychology in the Schools*, October 1980, *17*, 466-473.

Makes a comparison between the results of 8 autistic children on the *Peabody Picture Vocabulary Test* (PPVT) and the *McCarthy Scales of Children's Abilities* (MSCA). A correlated t-test and Pearson product coefficients were calculated between the scores of the two tests in a within-subjects design. The comparison showed a significant difference between the two tests indicating the PPVT score an underestimate in comparison with the ratings on the MSCA. Of the five MSCA subscales, the PPVT correlated .954 with the Verbal Scale, .856 with the Perceptual Scale and .785 with the Memory Scale. Nonsignificant coefficients were found between the scores on the PPVT and the MSCA Quantitative and Motor Scales.

ELLIOTT, MAX. Quantitative evaluation procedures for learning disabilities. *Journal of Learning Disabilities*, February 1981, *14*, 84-87.

Reviews various expectancy formulas and notes the effect on the composition of a learning disabilities classroom with each. An alternate procedure using z-score conversions is suggested and z-score conversion tables for the Stanford-Binet, WISC-R, Wide Range Achievement Test are presented.

SMITH, LAWRENCE L. Differentiating between reading expectancy formulae: after converting the scores to stanines. *Reading Improvement*, Summer 1980, *17*, 140-148.

Uses seven reading expectancy formulae and converts the scores to stanines and then compares the expectancy stanines to an observed reading stanine. The subjects consisted of 161 grade two, four, and six pupils who had completed the *Cognitive Abilities* Non-verbal section and the *Metropolitan Achievement Test*, Reading. The expectancy formulae scores were checked to see if they classified the same pupils as able or disabled readers. In such comparisons, the Horn Formula, the adapted Harris formula, and the Monroe formula were in agreement at least 90% of the time when the grade equivalent scores were converted to stanines.

V-13C Cloze testing

DUPUIS, MARY M. The cloze procedure as a predictor of comprehension in literature. *Journal of Educational Research*, September/October 1980, *74*, 27-33.

Examines hypotheses related to the prediction of comprehension from cloze scores on short stories and a novel, effects of practice on cloze scores, and correlations with sex, socioeconomic status, and standardized test scores. Subjects involved 360 tenth-grade English course students in a school located in a small university city. Readability for the three selections was placed at the sixth- and seventh-grade levels. Cloze tests were given as pretests and were correlated with multiple choice comprehension posttests for short stories and the novel. Cloze test scores of 40% correlated significantly with past reading comprehension scores except in the case of female students on the novel, *Lord of the Flies*. Multiple regression revealed that the standardized reading test was the best predictor of variance followed distantly by father's educational level.

CUNNINGHAM, JAMES W., & TIERNEY, ROBERT J. Evaluating cloze as a measure of learning from reading. *Journal of Reading Behavior*, Fall 1979, *11*, 287–292.

Examines three types of cloze tests developed from seventh grade textbook fiction and nonfiction passages to determine their promise as pre/post-testing paradigms for investigating acquisition of information from written texts. The cloze test patterns compared were: typical every fifth word; every fifth word from random order word listings, and every fifth least major constituent. Subjects for the fiction passage were 244 seventh and eighth graders in North Carolina; 213 seventh and eighth graders from an Arizona school served as subjects for the nonfiction passage. Subjects were randomly assigned to reading and buffer groups. Specific findings are presented in tables and related discussion. With the possible exception of nonfiction regular cloze, all test data appeared reliable under KR20 and Test-Retest measures. All measures, with the exception of LMC nonfiction were significantly sensitive to reading learning. Recommendations for using cloze for learning assessment purposes are given.

BERK, RONALD A. The relative merits of item transformations and the cloze procedure for the measurement of reading comprehension. *Journal of Reading Behavior*, Summer 1979, *11*, 129–138.

Evaluates the relative merits of item transformation and cloze procedures in terms of literal comprehension, passage dependency, and professional utility by means of a heuristic analysis and review of the research literature. Concludes that cloze procedure offers distinct advantages over six common sentence derived test item transformation criteria: assessment of semantic and syntactic relationships, dependency on context, and ease of development, administration, and scoring of items.

BROWN, JAMES DEAN. Relative merits of four methods for scoring cloze tests. *The Modern Language Journal*, Autumn 1980, *64*, 311–317.

Compares four methods for scoring cloze tests: 1) exact-answer (EX), 2) acceptable-answer (AC), 3) clozentropy (CLZNT), and 4) multiple-choice (MC). The population administered the tests consisted of 112 students who had taken the *UCLA ESL Placement Examination* (UCLA ESLPE). Of this group, 57 were assigned randomly to the MC format and 55 an open ended format of the same cloze passage. In terms of standard error of measurement, the EX cloze scoring procedure appeared to be slightly superior to the others. Reliability coefficients for the four scoring methods were all high, but the AC method appeared superior to the others. Validity coefficients were obtained by correlating each cloze scoring method with the UCLA ESLPE. These coefficients ranged from .88 to .91. Mean item facility and discrimination were determined for the EX, AC, and MC procedures. The mean item facility for the EX method was .30; for AC, .51; and for MC, .64, indicating that the EX method was too difficult and the MC, too easy. In terms of ease of scoring, the MC was scored most quickly and efficiently and the CLZNT was the most difficult, tedious, and error prone. The best overall cloze scoring method for productive skills, if all criteria are considered to be equal, was the AC procedure.

V–13d Content analysis of tests

JONGSMA, KATHLEEN S., & JONGSMA, EUGENE A. (Reviewers). Test review: commercial informal reading inventories. *The Reading Teacher*, March 1981, *34*, 697–705.

Selects 11 commercial informal oral reading inventories to compare their construction in the light of passage content and questions employed, procedures for

administering and scoring, and test interpretation. Found was a variability among instruments on the content, style, and length of the passages, with readability estimates as the chief means of passage validity and scaling. On the criterion of test administration, differences were noted on the value of reading accurately and in the directions to the examiner. Considerable differences were reported on what constituted an error in oral reading such as repetitions. Comprehension was largely assessed through the use of questions, with factual recall of information as the dominant type. Finally, no data were determined on any test to validate the correspondence between reading levels established through informal reading inventory testing and classroom performance.

MARR, MARY BETH, & LYON, KATHLEEN R. Passage independency and question characteristics: an analysis of three informal reading inventories. *Reading Psychology*, Spring 1981, *2*, 97-102.

Examines three informal reading inventories (IRI) to identify passage independent test questions. Subjects were 36 fourth graders from a rural school. Stratified randomly into three IRI test groups, the students were administered the test questions orally without access to the passage. The percentage of questions answered correctly was calculated for each test. An analysis of variance procedure disclosed that the *Classroom Reading Inventory* was the most passage independent, followed by the *Analytical Reading Inventory* and the *Ginn 720 Inventory*, respectively. An analysis of children's responses to the questions revealed that three question categories in particular tended to be independent: (a) general information, (b) vocabulary meaning, and (c) affective.

REYNOLDS, CECIL R. An examination for bias in a preschool test battery across race and sex. *Journal of Educational Measurement*, Summer 1980, *17*, 137-146.

Determines the fairness of selected preschool tests for predictive purposes using as subjects 176 white and 146 black kindergarten children from a school district located in a small metropolitan area in the Southeast. The subjects were primarily from middle- to lower-class families. Tests administered were the *Metropolitan Readiness Tests*, the *McCarthy Drawing Tests*, *Lee-Clark Reading Readiness Test*, *Tests of Basic Experiences*, and ETS *Preschool Inventory*. The criterion measure used was the *Metropolitan Achievement Tests* (MAT), Primary 1. Multiple regression equations were computed employing all independent variables in the prediction of each MAT subtest score for the total sample. Findings did not indicate the presence of bias in the prediction of first grade achievement across race and sex among the battery of tests. For the two-test regression equations, no main effect occurred for race, and there were no significant race by sex interaction for any of the dependent measures.

DIAMOND, ESTHER E. The AMEG Commission report on sex bias in achievement testing. *Measurement and Evaluation in Guidance*, October 1980, *13*, 135-147.

Surveys by questionnaire publishers of more than 20 widely used achievement tests, aptitude tests that measure a broad range of aptitudes, and tests of educational ability and development to examine sex bias in testing. For eight of the achievement instruments and for one of the multi-aptitude batteries, publishers have issued sex bias guidelines. Of the guidelines submitted, most dealt with the use of nonsexist language, the portrayal of males and females, and frequency of male and female referents or characters. Only three achievement test publishers and two aptitude test publishers provided normative information by sex.

KLEIN, ALICE E. Redundancy in the Iowa tests of basic skills. *Educational and Psychological Measurement*, Summer 1981, *41*, 537-544.

Analyzes data on Form 7 of the *Iowa Test of Basic Skills* (ITBS) to determine whether the subtest scores would yield non-redundancy information or generalizability of the test battery. Test data were secured on 790 fourth graders and 729 eighth graders who attended school in a large, primarily middle-class, Southeastern suburban district. Estimates of internal consistency were calculated as well as intercorrelations among all subtest, subtotal, and total scores. Factor analyses were performed with the two different samples on levels 10 and 14 of the ITBS, Form 7. The intercorrelations provided by the 1977 fourth and eighth grade national standardization sample for these same levels were also factor analyzed. Results of all the analyses showed that there was essentially one common factor with little evidence for the meaningful differentiation of the 11 subtest scores or three subtotal scores.

KLEIN, ALICE E. Redundancy in the comprehensive tests of basic skills. *Educational & Psychological Measurement*, Winter 1980, *40*, 1105–1110.

Analyzes factorially results on the *Comprehensive Tests of Basic Skills* (CTBS), Form S, for 348 fourth graders and 384 sixth graders to determine whether the three subtotal scores were relatively independent. Level 1 was given to the fourth graders and Level 2 was administered to the sixth graders. For both samples, the Reading subtest factors of Vocabulary and Comprehension and the Language Expression subtest clustered together. Results of both analyses showed but one common factor among the eight different subtests on three subtotal scores produced by the CTBS.

WELLS, GORDON. Some antecedents of early educational attainment. *British Journal of Sociology of Education*, 1981, *2*, 181–200.

Reports a longitudinal study of language development of 32 children from one to seven years of age and includes data from recordings of spontaneous conversation in the home, interviews with the parents, tests and teachers' assessments. Standardized tests administered were the *English Picture Vocabulary Test*, the *Knowledge of Literacy* test, an adapted version of Frostig's visual and motor coordination test, and the *Neale Analysis of Reading Ability*. The results indicated that scores on measures of oral language at successive age-points yield progressively stronger predictions of later educational attainment. With respect to both oral and written language, differences between the children were found to be associated with differences in the content and style of their parents' interactions with them but, while such differences were only marginally associated with social class in the case of oral language, there was a strong association between literacy and class. These results are discussed in terms of alternative theories of linguistic disadvantage.

LUNDBERG, INGVAR; OLOFSSON, ÅKE; & WALL, STIG. Reading and spelling skills in the first school years predicted from phonemic awareness skills in kindergarten. *Scandinavian Journal of Psychology*, 1980, 21(3), 159–173.

Studies a causal relation model of certain metalinguistic skills in kindergarten and later achievement in reading. Subjects were 200 Swedish kindergarteners, reduced by attrition to 133 by the end of the first semester of second grade. The battery of metalinguistic tests administered in kindergarten included four different auditory synthesis tasks, four auditory segmentation tasks, one rhyming task, two perceptual decentration tasks and a screening task for reading ability. First and second grade data included a test of silent word reading, a spelling task, the *Ravens Progressive Matrices* and teachers' ratings of spelling, writing, language comprehension, and language production. The quantitative implications of the model were worked out by path analysis. The most invariant and important determinant of basic reading and spelling skills was the analysis of simple words. Failure and success in school could be predicted with high accuracy on the basis of preschool data. Over 70% of the children were classified correctly in the extreme quartiles as to their future school achievement. The methodological advantage of applying path analysis instead of conventional multiple regression analysis on the present problem was discussed.

V-13e Test reliability and validity

HANNA, GERALD S. An improved design for examining the importance of context dependence. *Journal of Reading Behavior*, Winter 1979, *11*, 329–337.

Presents rationale, a methodology, and the results of two experiments concerning the importance of context or passage dependence in answering questions in standardized reading and social studies tests. In the first experiment, 256 seventh and eighth grade students answered the questions on the Reading Test of the *Sequential Tests of Educational Progress*, Forms 3A and 3B, under alternate conditions of context present and context absent. Three indices of content dependency were calculated: Pyrczak's I, Tuinman's PDI, and Hanna-Oaster's CDI. The second experiment repeated the procedures of the first with the Social Studies Test of the *STEP*, Forms 3A and B, using 142 seventh and eighth graders as subjects. Results are presented in terms of test item indices comparisons with little direct evidence of the comparative reading comprehension performance of the subjects.

DUFFELMEYER, FREDERICK A. The passage of factual and inferential questions. *Journal of Reading*, November 1980, *24*, 131–134.

Seeks to determine if with the passage absent, factual questions are easier to answer than inferential questions. Ten children each from grades one through eight participated. Children were given factual and inferential questions from the appropriate level of the oral reading section of the *Classroom Reading Inventory*. Of the total of 22 factual and 11 inferential questions, 15 of the factual and about half of the inferential were passage dependent.

KIRSCH, IRWIN S., & GUTHRIE, JOHN T. Construct validity of functional reading tests. *Journal of Educational Measurement*, Summer 1980, *17*, 81–93.

Describes and tests a method of examining the construct validity of functional reading tests. The method of the study is a task analysis of the *Adult Functional Reading Survey* (AFRS). In the original AFRS, tests on 170 reading passages were administered to a national sample of 7,596 adults. Educational attainment and income levels of this sample were also available. This data base was used in the present study. The authors constructed five variables they thought necessary to answer any stated questions that accompany any reading passage. The five variables were 1) congruence of order of information in the question and the passage, 2) the salience of information (detectability), 3) the amount of information (a simple word or number count), 4) the correspondence of words and typography in the question and passage, and 5) the number of information categories in the question and document. There were five levels of ratings or scores for each variable. Each author independently evaluated 52 items selected from the 170 reading tasks of the AFRS and scored them on each of the five variables. Performance on the reading passages of the 7,596 subjects was positively related with amount of education and income. All five variables were significantly correlated with reading difficulty for the total population and within each educational and income level. Using a stepwise regression, it was found that salience was the variable most highly related to difficulty for all subjects (R=.74) and order was the second most related (R=.56). The authors conclude that using the definitions and scoring codes for their five variables, the constructs measured by a literacy test may be described.

LANDMAN, JANET T.; IRVIN, LARRY K.; HALPERN, ANDREW S. Measuring life skills of adolescents: tests for everyday living (TEL). *Measurements and Evaluation Guidance*, July 1981, *13*, 95–106.

Discusses the development and standardization of an instrument designed to assess life skills of adolescents and young adults. In addition, the relationship between mastery of applied reading skills and mastery of knowledge in several life-skill domains was investigated. The instrument, *Tests for Everyday Living* (TEL), consists of a battery of seven life-skill tests and one basic reading skill. Content domains include job-

search skills, job-related behaviors, health care, home management, purchasing habits, banking, and budgeting. The standardization sample for the TEL included 525 junior high/middle school pupils and 325 senior high school students. Four school districts participated in the standardization study. Senior high students were divided into regular and remedial groups. Alpha internal consistency reliability coefficients were .77 or above for junior high pupils; for senior high students, five of the seven test reliability estimates exceeded .75. No sex differences were noted at any grade level for any test or for the total battery. Mean scores were highest on every battery for regular high school seniors. Correlation coefficients for the seven individual tests with the total battery ranged from .78 to .86 at the junior high level and from .77 to .88 for the total senior high sample. Coefficients of correlation of the TEL Reading Scale with each of the seven tests ranged from .55 to .69 at the junior high level and from .54 to .74 at the senior high level.

LATHAM, W., & PARRY, O. Functional reading and the schools: a progress report. *Journal of Research in Reading*, September 1980, *3*, 140–149.

Describes the development and validation of a criterion-referenced test designed to assess functional reading skills needed by 16-year-olds in Sheffield, England. Samples of reading materials were obtained from a job center and from a large number of firms employing 16-year-old school leavers. Various types of test items were constructed based on the reading materials obtained. Content validation was ensured by the use of employer panels and a panel of two linguists. Items were piloted in a comprehensive school, using middle-ability students. Two forms, a short and a long one, of the test were constructed. Test-retest reliabilities of .83 and .90 were found for the short form and .54 and .51 for the long form. The product-moment correlation coefficient between the short form of the test and the *Edinburgh Reading Test*, Form 4 was .81.

CALFEE, ROBERT C., & DRUM, PRISCILLA A. How the researcher can help the reading teacher with classroom assessment. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale: Lawrence Erlbaum Associates, 1979, *2*, 173–205.

Seeks to provide information on the process of assessment for evaluative purposes as well as on what classroom assessment should consider in the measurement of reading skills for short-term decisions. Reviewed was the relevance of reliability, validity, appropriateness, independence, discriminability, cost and repeatability as criteria for evaluating tests. For short-term instructional decisions, three characteristics of tests were delineated. First, tests should be specific with a minimum demand on extraneous factors to the skill being tested. Second, testing should permit clinical probing rather than a stress on standardization. Third, testing should include more attention to breadth rather than precision in classroom assessment.

LUNZER, ERIC; WAITE, MAURICE; & DOLAN, TERRY. Comprehension and comprehension tests. In Eric Lunzer & Keith Gardner (Eds.) *The effective use of reading*. London: Heinemann Educational Books, 1979, 37–71.

Discusses the rationale and problems of comprehension testing with particular attention given to whether it is possible to measure reliably reading subskills. Presents extensive specific results of reading testing of 257 east Midland English primary school subjects on four tests constructed to represent a consensus identification of key reading subskills in the passage and subsequent questions. As interpreted by the researchers, the tests produced have adequate reliability and validity to recommend them as reading comprehension tests, but failed to provide adequate evidence of differential abilities.

FLIPPO, RONA F. Diagnosis and prescription of college students in developmental reading programs—a review of the literature. *Reading Improvement*, Winter 1980, *17*, 278–285.

Reviews the research and literature from 1935 through 1979 on the problems and issues in testing and diagnosis of postsecondary students' reading abilities. Seventy-five sources are cited. In particular, the article views the use of standardized testing and instruction based on the testing. Little research was found that explored the comparison between diagnostic and survey testing. There was a lack of consensus relative to the most efficient effective methods of testing, diagnosing, and remediating at the postsecondary level.

CROWELL, DORIS C., & AU, KATHRYN HU-PEI. A scale of questions to guide comprehension instruction. *The Reading Teacher*, January 1981, *34*, 389–393.

Validates a scale of questions on a sample of 25 second graders who were enrolled in a laboratory school for normal part-Hawaiian children from low-income urban families. Levels of reading comprehension were delineated as association, categorization, seriation, integration, and extension. From a reading series, fourteen stories were selected to serve as test material for the five levels of prototype questions. Data were secured from the responses of children to questions asked on the stories read. According to the analysis of the responses across all fourteen stories, the findings supported in general the scale of questions as a guide to assess children's ability to apply comprehension skills at five levels to stories read independently.

HATTIE, JOHN. A confirmatory factor analysis of the PAT: reading comprehension, reading vocabulary, and listening comprehension tests. *New Zealand Journal of Educational Studies*, November 1979, *17*, 172–186.

Analyzes both the methods and conclusions of an earlier experiment on discriminant validity of the *Progressive Achievement Tests* (PAT) and reanalyzes the data by techniques of unrestricted factor analysis. The PAT subtests are Reading Comprehension, Reading Vocabulary, and Listening. Original data were secured on 421 children from 14 classes throughout the area of Wellington, New Zealand. The earlier study found results to support the claim that the three PAT tests provided information about different aspects of a child's verbal ability. Contrary to the original findings, the reanalysis produced different conclusions, namely that the PAT tests are measuring to a large extent the same underlying abilities.

POWELL, GLEN; MOORE, DAVID; & CALLAWAY, BYRON. A concurrent validity study of the Woodcock Word Comprehension Test. *Psychology in the Schools*, January 1981, *18*, 24–27.

Seeks concurrent validity of the *Woodcock Word Comprehension Test* (WWCT) with measures of reading achievement and measures of verbal intelligence. Subjects were 194 children, ages 6 to 16, who were tested in a university reading clinic. All subjects were administered the *Woodcock Reading Mastery Tests* the *Slosson Oral Reading Test*, an informal reading inventory, the *Wechsler Intelligence Scale* for *Children*-Revised, the *Slosson Intelligence Test*, and the *Peabody Picture Vocabulary Test*. Pearson product-moment correlation coefficients that were obtained ranged from .437 to .733 between scores on the WWCT and the measure of sight vocabulary; the coefficients between the WWCT and measures of passage comprehension ranged from .654 to .895. Results pointed out that performance on the WWCT was more a function of reading ability than of some general verbal factor.

PRICE, EURWEN. Monitoring attainment in the Welsh language in schools. *Journal of Multilingual and Multicultural Development*, 1980, *1*, 41–47.

Describes the work of developing instruments to assess Welsh language skills. An account was given of the preparation of a set of wide-range tests to assess the Welsh reading standards of both first-language and second-language pupils, and the linking of these tests to show cross-category comparisons of scores. The test was administered to a sample of about 1,600 eleven-year-olds in Wales in 1978. The results are presented elsewhere.

SANDOVAL, JONATHAN. Reliability and concurrent validity of Light's retention scale. *Psychology in the Schools*, October 1980, *17*, 442–445.

Evaluates the reliability and concurrent validity of Light's *Retention Scale* as a device for aiding in decision making on school retention. Used as subjects were 123 candidates to repeat the first grade. The subjects were tested with a number of measures, including achievement tests, measures of intellectual functioning, visual-motor integration, self-concept, and physical maturity. Factor analysis results showed Light's total score was not sufficiently reliable and had little concurrent validity for making retention decisions.

OLSON, ARTHUR V. The questionable value of perceptual tests in diagnosing reading disabilities. *Journal of Research in Reading*, September 1980, *3*, 129–139.

Reviews recent studies on perceptual tests in relation to reading disability to judge the value of the *Frostig Development Test* of *Visual Perception* and the *Bender Visual Motor Gestalt Test* in the diagnostic process. The body of research was interpreted to suggest that the Frostig DTVP's five subtests possess a common perceptual function and not distinctly separate perceptual abilities. As for the Bender, the research seemed to indicate that the test is a reasonable predictor of reading achievement.

WARK, DAVID M., & BENNETT, MICHAEL. The measurement of test anxiety in a reading class. *Reading World*, March 1981, *20*, 215–222.

Reports on the reliability and validity of the *Test Anxiety Scale* (TAS) as computed from data on 216 subjects who were students at a Midwestern university. Kuder-Richardson reliabilities were calculated for three groups of students who took the 16-item short form of the TAS. Two of the three groups were enrolled in reading or study skills courses. Data were also collected for two groups of students on reading comprehension based on scores from standardized reading tests. Reliability of the TAS was judged as high; results also revealed a relationship between high test anxiety scores and low reading comprehension performances.

HANNA, GERALD S.; SCHERICH, HENRY H.; & DRAHOZAL, EDWARD C. Overestimation of internal consistency by K-R 20 in tests containing interpretive exercises. *Measurement and Evaluation in Guidance*, January 1981, *13*, 217–221.

Demonstrates the extent to which K-R 20 reliability estimates exceeded those of coefficient alpha by blocks for the Reading Comprehension subtest of the *Nelson Reading Skills Test* (NRST). Each level of this subtest contains five reading passages and from twenty-eight to thirty-four test questions. The population sample consisted of approximately 400 examinees per grade at grades three through nine drawn from several school districts that were used to equate Form 3 and 4 of the NRST. Approximately half the students in each school at each grade took Form 3 of the appropriate level, while the other half took Form 4. A week later, each student took the other form. The K-R 20 and alpha estimates of internal consistency were computed for each form at each grade. At all levels, the K-R 20 estimates were found to exceed the alpha estimates. The differences between these two estimates of internal consistency had a medium value of .05. K-R 20 coefficients ranged from .89 to .93; coefficient alpha estimates ranged from .81 to .89.

AARON, ROBERT L.; SEATON, HAL W.; & MOORE, DAVID W. Analysis of the Estes Scale for assessing the reading attitude of minority students. *Reading Improvement*, Summer 1980, *17*, 100–103.

Administers the *Estes Attitude Scale* (EAS) to assess the reading attitude of 849 low-income rural black pupils in grades three through seven. Reliability estimate of .70 was computed by correlation between split-halves of the EAS and was found to be significntly less than the coefficient from the original EAS field testing. Measures of central tendency indicated a neutral attitude toward reading. Evaluation of standard deviations and item-to-total test correlations tended to verify that the test items did not appear to discriminate adequately high and low reading attitudes of the subjects.

V-14 Instructional time

BOOTH, GORDON K. Effects of length of schooling upon early reading attainment. *Educational Research*, November 1980, *23*, 57–58.

Views length of schooling as it affects levels of attainment in reading. Data comprised *Young Group Reading Test* raw scores from 1531 primary 2 Scottish children. Comparisons were made of mean raw scores at different age levels between six-and-a-half and seven-and-a-half for the original Young norms (1968) and those of children in this new standardization sample. The original norms showed a broader range of raw scores as compared to the newer scores. When means for 1978 (N=1656), 1979 (N=1474), and 1980 (N=1448) were viewed, the mean standard score for 1979 (97.80) was significantly lower than that for 1978 (99.39) or 1980 (100.29). The author attributes the difference to a mean loss in schooling of between nine and ten days due to school closures for various reasons.

ALLINGTON, RICHARD L. Poor readers don't get to read much in reading groups. *Language Arts*, November/December 1980, *57*, 872–876.

Compares the number of words read by children in the good and poor reading groups in 24 grade one and two classrooms. Observers in the classrooms either noted the pages read (orally or silently) or audiotaped the instructional session. An analysis of variance was then used on the mean number of words read by pupils. Good readers read more than twice as many words per session as poor readers. Poor readers were seldom asked to read silently either individually or as a group.

DOLAN, TERRY; HARRISON, COLIN; & GARDNER, KEITH. The incidence and context of reading in the classroom. In Eric Lunzer & Keith Gardner (Eds.) *The effective use of reading*. London: Heinemann Educational Books, 1979, 108-138.

Uses a classroom observation instrument, the Reading Behavior Inventory, to describe the actual reading tasks pupils undertook during the school day in Nottinghamshire and Derbyshire. In order to determine the classroom use of reading and writing, as well as to determine if existing practices provide an appropriate context for promoting effective reading, 16 classrooms of junior and secondary students were observed for 9,990 minutes in four subject areas in order to answer questions related to amount of pupil reading, its relation to other activities, and its importance throughout the curriculum. Secondary age classes spent more time in reading in each subject area than did junior classes. Salient language activities for each level included writing and discussion (junior); listening and reading (first-year secondary); and listening, reading, and writing (fourth-year secondary). In all classrooms, approximately half of all reading occurred in bursts of fewer than 15 seconds per minute. Major findings of the main study were sustained when primary school data were collected from 17 schools for 9,464 minutes.

PORTER-GEHRIE, CYNTHIA, & BRIESCHKE, PATRICIA. Understanding classroom intrusions in a complex school organization. *The Elementary School Journal*, March 1981, *81*, 237–243.

Maintains a teacher-observer log over 24 consecutive school days of classroom interruptions caused by persons entering one inner-city sixth-grade classroom. Interruptions were noted in terms of who initiated an interruption as well as the instructional or administrative role of the interruptor. Purposes of interruptions were classified as requesting information, censuring a pupil's conduct, issuing a directive, or responding to the classroom teacher's invitation to visit the class. Data were analyzed for frequency and nature of interruptions, effect on academic achievement, and attitudes toward pupils projected by interruptors. A total of 144 interruptions were recorded made by persons filling 20 different roles including the reading laboratory teacher, librarians, learning disabilities teacher, ESEA master reading teacher, adjustment teacher, assistant principal, ESEA coordinator, and principal. Of the interruptions, 71 were classified as requests such as for pupil files, asking teacher to complete various forms such as skill records, order forms for tests, and file updates. Forty-six interruptions were for censure, and 14 were invitations. Two-thirds of the administrators' interruptions were either requests for information or censures. The four children most frequently involved in classroom interruptions all read at a primary level. Of the 63 interruptions involving these pupils, 35 were critical. The three highest achievers in the class were interrupted only nine times ond only one of those was critical. The data point to a relationship between frequency of interruptions and reduced time in academic tasks.

STALLINGS, JANE. Allocated academic learning time revisited, or beyond time on task. *Educational Researcher*, December 1980, *9*(11), 11–16.

Reports the findings of a two-phase study conducted in 87 secondary remedial classrooms to determine the effect of time allocated to specific reading activities on student reading gain and to determine how the distribution of time affects specific reading levels. In the first phase, 43 teachers from six Northern California districts were involved; in phase two, 44 teachers in the same districts were participants. Classrooms were observed for three consecutive days and teachers, aides, volunteeers, and students placed on a matrix which had been devised to identify the reading activities taking place. Five such matrices were filled out for each observation. Students were administered the *Classroom Environment Scale* and teachers were given a flexibility/structured scale on which to rate their own behavior. In addition, pre- and posttest reading scores, rating scales, and absence data were recorded for students. The mean percentage of observed time spent in various reading activities over the two phases was 14%, silent reading; 6%, reading aloud; 4.5%, making assignments; 15%, instruction; 21%, written assignments; and 26%, classroom management. Further analyses showed that more than average gain in reading was made by low achievers in classrooms where teachers allocated more time to such activities as discussion/review, oral reading, drill and practice, praise and support, and supportive corrective feedback (interactive on-task instruction). In classrooms where the average gain was slight or negative, more time was allotted to such things as classroom management and silent reading (noninteractive on-task instruction). Off-task activities including social interactions, behavior problems, transition time, and uninvolved students were also negatively related to reading gain. In the second phase of the study, a treatment group of teachers received six workshops based on the findings on time allocation and interactions. Treatment teachers tended to change behavior and their students gained six months more in reading than did control teachers' students.

GUTHRIE, JOHN T.; MARTUZA, VICTOR; & SEIFERT, MARY. Impacts of instructional time in reading. In Lauren B. Resnick & Phyllis A. Weaver (Eds.) *Theory and Practice of Early Reading*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1979, *3*, 153–178.

Uses the data base from a previous questionnaire study to determine the characteristics of instructional programs in reading that influence pupil achievement and also the degree to which previous achievement, age, sex, reading level, and socioeconomic status influence achievement. A sample from the previous base was selected and included second- and sixth-grade children in compensatory and regular classrooms. In grade two, the tests given were the *Cooperative Primary Tests* and the *Metropolitan Achievement Tests*, Primary I. In grade six, the tests were the *Metropolitan Achievement Tests*, Elementary, and the *Sequential Tests of Educational Progress*, Series II. Questionnaires obtained from both teachers and principals gave information on instructional time and emphases. Time in formal reading instruction tended to increase achievement in reading. Maximum instructional time influenced some types of children more than others. Instructional time seemed to have greater impact at grade two than at grade six and had the greatest impact on compensatory grade two children. Types of instructional emphasis had less impact on achievement than did amount of instructional time. Sex and socioeconomic status did not influence gains in achievement over one year.

V–15 Television and reading instruction

SZABO, MICHAEL, & LAMIELL-LANDY, ANN. Television-based reading instruction, reading achievement, and task involvement. *The Journal of Educational Research*, March/April 1981, *74*, 239–244.

Undertakes research to study the facilitating effect of TV-based reading instruction on reading skill development and on instructional events related to task engagement. The Television Reading Program (TVRP), a supplementary program using scripts from prime-time TV shows with companion vocabulary and comprehension exercises in pupils' booklets, was used in the study. In Minneapolis, forty classes each of grades four, six, and nine were assigned on a random basis to TVRP or non-TVRP. In Chicago, sixty volunteer teachers used TVRP and a comparison group was selected by school district personnel for a non-TVRP comparison group. In addition to their regular instructional program, treatment teachers were requested to use the nine TVRP script materials as supplementary reading plus whatever TVRP exercises they wished to include. Viewing the program was an optional activity. To collect information about task involvement, the *Secondary Observation Instrument* was used in three TVRP and three non-TVRP sixth-grade classrooms. A 36-item reading achievement test based on TVRP objectives was developed and administered toward the end of the school year. There were four items for each of nine objectives. All subscale and total score comparisons favored the treatment group. The differences were significant for the total score and for seven of the nine subscales for both the Minneapolis and the Chicago groups. For the Minneapolis group, differences were not significant for the Facts or Inference subscales; for the Chicago group, nonsignificant differences were found for the Characterization and Inference subscales. Fourteen of 18 scores developed on the observations showed greater task involvement on the part of the TVRP classes.

VI. Reading of atypical learners

VI–1 Visually handicapped

ANDERSSON, TORSTEN. Microfiche as a reading aid for partially sighted students. *Visual Impairment and Blindness*, May 1980, *74*, 193–196.

Conducts experiments to determine the usefulness of microfiche as a practical reading aid for partially sighted persons. Subjects were four males and five females,

ranging in age from 20 to 50 and ranging in visual acuity between 20/2000 and 20/100. Six of the nine read faster with the microfiche system than with other optical aids; four of the nine felt more strain in reading with optical aids than with microfiche, but five noticed no difference. For reading running text, the microfiche system was found to be superior to both optical aids and closed circuit television, but the closed circuit television was felt to be best for those with extreme visual handicaps and for reading such materials as letters and newspapers. The three aids appeared to complement one another.

CATON, HILDA, & RANKIN, EARL. Variability in age and experience among blind students using basal reading materials. *Visual Impairment and Blindness*, April 1980, *74*, 147–149.

Reports results of a questionnaire survey sent to 20 residential schools for the blind, four state departments of education, and two public school systems, designed to determine whether blind students completed basal programs at the rate the publishers' levels indicate. Results showed that blind students were about one-and-one-half years older than the designated grade level of materials they were using in primary grades. Blind students working in first-grade material ranged from six to 12 years of age. Differences in age and years in school between blind and sighted children at the same reading level are cited as consideration for the inappropriateness of graded basal series with blind children.

HUNSTAD, EGIL; SELNES, OLAF M.; & KREKLING, STURLA. 'Blind' children as visual readers. *Scandinavian Journal of Educational Research*, 1979, *23*(3), 91–100.

Compares the tactile and visual reading performance of seven severely visually handicapped children, ages 10 to 16, while using braille and Closed Circuit Television System (CCTS) techniques. All subjects were either extremely slow visual readers or visual illiterates, and had previously been trained only in braille reading for from one to eight years. The visual task conditions that were optimal for each subject were initially determined. At the same time, training in single letter identification with the CCTS (an innovative visual system) was offered to counteract the effect of some subjects' prior visual experiences with letters. Subjects were subsequently trained in visual word recognition for nine days. Speed in tactile and visual sentence reading was measured before and after the visual training period. All subjects increased their visual reading performance. For some subjects, visual reading surpassed braille speed.

VI-2 Hearing impaired

DAVIS, JULIA M.; STELMACHOWICZ, PATRICIA G.; SHEPARD, NEIL T.; & GORGA, MICHAEL P. Characteristics of hearing-impaired children in the public schools. Part II—psychoeducational data. *Journal of Speech and Hearing Disorders*, May 1981, *46*, 130–137.

Presents descriptive data on the psychoeducational status of 1,250 randomly selected hearing-impaired children in the public schools of Iowa. A questionnaire survey was distributed to public school audiologists in 15 educational service centers to collect pertinent data contained in the personal school files of the hearing-impaired subjects. Scores from three forms of assessment tests (intelligence, language, and achievement) were extracted from the files, then converted to allow for analysis. Examination of questionnaire data revealed that only a small proportion of the files contained evidence of a complete psychoeducational evaluation. Although the researchers

suggest cautious interpretation because of incomplete data, they reported these trends: children with mild to moderate hearing loss do not exhibit significant academic problems, while children exhibiting more severe deficits demonstrate increasing educational difficulties over time. Intellectual and language test data indicate a steadily increasing verbal deficit across hearing-loss categories. The appropriateness of many of the assessment techniques, as well as the support services provided, is questioned.

KYLE, J. G. Reading development of deaf children. *Journal of Research in Reading*, September 1980, *3*, 86–97.

Examines two measures of higher-order reading skill (vocabulary and comprehension) and two basic skills underlying reading (letter equivalence and letter discrimination) in groups of 21 seven-year-old and 24 nine-year-old deaf children in an initial attempt to find the developmental locus of reading difficulties. All but three of the subjects were congenitally deaf. A group of 23 normal hearing children served as controls. Measures of nonverbal intelligence, reading ability, and letter discrimination were individually administered. Comparisons were made between younger and older pupils, and among the normal hearing and two categories of hearing loss subjects (profound and partial-severe). Although clear effects of age and degree of hearing loss were evident, there were indications that deaf children progress satisfactorily in the earlier stages of reading but have not achieved ability to extract meaning from sentences by age nine.

MCMAHON, MICHAEL A., & SUBTELNY, JOANNE D. Simultaneous listening, reading, and speaking for improvement of speech. *Volta Review*, May 1981, *83*, 206–214.

Evaluates the effectiveness of simultaneous listening, reading, and speaking as a method for improving the conversational speech of 22 hearing-impaired adults. Tape recordings of oral reading and spontaneous speech were secured both before and after 28 hours of instruction. Written language samples were also secured. The speech samples were analyzed to obtain ratings and measures of intelligibility; writing samples and transcriptions of spontaneous speech samples were analyzed and compared for grammatical acceptability. Results indicated that the intelligibility of reading and speech samples significantly improved after training. No significant improvement in grammatical acceptability of spontaneous speech or in writing was achieved.

GORMLEY, KATHLEEN A., & GEOFFRION, LEO D. Another view of using language experience to teach reading to deaf and hearing impaired children. *The Reading Teacher*, February 1981, *34*, 519–525.

Raises some questions about the premises employed in an earlier article proposing the use of a language experience approach with the deaf and hearing impaired. Research is cited. The authors then offer suggestions for strategies using a language experience approach.

BROOKS, GREG. Deaf schoolchildren, reading and sign language. *Journal of Research in Reading*, September 1980, *3*, 98–105.

Reviews the research literature related to the reading skills of deaf children. Recent research supports the idea that deaf children's reading achievement is poor due to their lack of an adequate first language. An analysis of existing sign systems is presented and recommendations are made for research.

MURPHY-BERMAN, VIRGINIA, & JORGENSEN, JULIE. Evaluation of a multi-level linguistic approach to captioning television for hearing-impaired children. *American Annals of the Deaf*, December 1980, *125*, 1072–1081.

Describes the evaluation conducted during year one of the Multilevel Project, a system for varying the linguistic difficulty of captioned video material to meet language and reading competency needs of hearing-impaired children. Hearing-impaired pupils who read at second, third, and fourth-grade levels (N ranged from 148 to 252) viewed five versions of three children's television programs. In versions one through three, captions were presented at different levels of linguistic complexity; version four was captioned according to an intuitively-based method; and version five was shown without captions. Children's comprehension of all three programs was higher with the captioned rather than the uncaptioned versions, and in all three assessments, second-grade readers showed significantly lower comprehension than third and fourth-grade readers. Differentiation in comprehension as a function of captioning mode was found for only one of the three programs. As the linguistic complexity of the captions increased in that program, pupils' comprehension scores declined.

SHROYER, EDGAR H., & BIRCH, JACK. Captions and reading rates of hearing-impaired students. *American Annals of the Deaf*, October 1980, *125*, 916–922.

Reports the reading rates of hearing-impaired students at four different levels, primary, elementary, junior high, and high school, in order to strengthen the empirical base for determining if reading rates presented on captioned films and television are compatible with the reading rates of deaf students. In Part I, 20 primary level readers with a mean age of 11-9, and 21 intermediate level readers with a mean age of 18-7, were randomly selected from a pool of students at a residential school for the deaf. All subjects were individually administered the *Gates-MacGinitie Reading Tests*. The speed and accuracy section of the test was individually administered to all students. A modified scoring system was developed to yield a words-per-minute reading rate. In Part II, a total of 185 subjects (M=82; F=103) also took the subtests of the Gates-MacGinitie. The scoring procedure provided mean reading rates for junior and senior high readers; rates of primary and intermediate readers were derived from the mean times achieved by the sample in Part I. Data from the initial samples were not significantly different from the means of the larger samples for primary pupils, but did differ significantly ($P < .05$) for the intermediate students. The investigators concluded that a large number of hearing-impaired students would appear unlikely to benefit from captions.

BRAVERMAN, BARBARA B. & HERZOG, MELODY. The effects of caption rate and language level on comprehension of a captioned video presentation. *American Annals of the Deaf*, October 1980, *125*, 943–948.

Explores the effect of caption display rate and assesses the effect of varying the difficulty of the caption's language level on comprehension of a video presentation by 187 elementary and secondary students (M=95; F=92) enrolled in schools for the deaf. All students viewed a one-half hour commercial television program captioned at 60, 90, or 120 words per minute and at increasing levels of linguistic complexity. Subjects were randomly assigned to one of six treatment conditions (three rate conditions and two language difficulty levels). Groups were equivalent in terms of reading level, age, and hearing loss. After viewing, students were tested for explicit, inferential and global comprehension. Caption rate did not appear to significantly affect comprehension. The language level of the captions influenced explicit and inferential comprehension, with subjects performing significantly better with lower, rather than higher, language level captions.

BRAVERMAN, BARBARA B.; EGELSTON-DODD, JUDY; HERTZOG, MELODY; QUINSLAND, LARRY; & AUSTIN, ALLEN. The effect of training in the use of

diacritical markings on the learning of medical terminology by young hearing-impaired adults. *Volta Review*, December 1980, *82*, 468–475.

Assesses the effects of teaching a diacritical notation system to nine hearing-impaired adult students on their ability to recognize the meaning of technical vocabulary presented in a medical technology course. Treatment materials were prepared with three conditions of learning aids for course materials: added diacritical markings, added diacritical markings and syllabication, or no pronunciation aid. A comprehensive instrument requiring subjects to match the 69 terms covered in the treatment materials with their definitions served as pre- and posttest. Instruction in the marking systems preceded the treatment conditions. On the basis of pretest performance, the three subtests were judged to be of equal difficulty. Students performed at a higher level on posttest items in all three conditions. Items diacritically marked were correctly recognized more often than items in the diacritical/syllabication or control conditions.

COLEY, JOAN D. & BOCKMILLER, PATRICIA R. Teaching reading to the deaf: an examination of teacher preparedness and practices. *American Annals of the Deaf*, October 1980, *125*, 909–915.

Surveys the teachers of reading of 122 residential schools for the deaf to determine the extent of their training in reading instruction, the methods they used to teach reading to the hearing-impaired, and the perception of how well prepared they were to employ a variety of reading methods. Questionnaires were returned by 395 staff members. Of the respondents, slightly more than half had Masters' degrees. A total of 40% had no graduate course in reading; about one-fifth of the teachers had no undergraduate reading course. Basal readers were the most prevalently used approach to teaching reading. Over 40% reported spending more than half of their instructional time with basals. In general, teachers used approaches more frequently when they felt prepared for their use.

IVIMEY, G. P. The production and perception by profoundly deaf children of syntactic time cues in English. *The British Journal of Educational Psychology*, February 1981, *51*, 58–65.

Investigates the hypothesis that the stage of development achieved by profoundly deaf children in verb-phrase production would influence the perception of verb phrases in language reception. Nineteen students enrolled in the same residential school for the deaf in England, with a mean chronological age of 12-8, and a reading age of seven years, served as subjects. A reading task was prepared (using familiar vocabulary words) which required the subjects to recognize the time reference of simple sentences varying in verb tense. The test was also administered to a control group of 30 normally hearing children with equivalent reading levels. Comparisons were made between deaf children's recognition of the time reference of sentences (either present, future, or past) and their production of verb phrases, gauged in an earlier study. There appeared to be a close relationship between the children's production of verb phrases and their ability to interpret the time reference of written English. Comparisons are also made with the hearing control group.

MCGILL-FRANZEN, ANNE, & GORMLEY, KATHLEEN A. The influence of context on deaf readers' understanding of passive sentences. *American Annals of the Deaf*, October 1980, *125*, 937–942.

Investigates the postulate that the salient factor in the deaf child's interpretation of truncated passives is the meaningfulness of the task rather than the age of the subject. Thirty-six second- and fourth-level reader deaf pupils matched for age were

assessed on comprehension of truncated passive sentences under two task conditions. Subjects were asked to identify the picture representing the agent and object relationship in truncated passive sentences which were presented in isolation in the first task and embedded within familiar prose passages in the second task. Contrary to prior research, neither age nor reading level were significant factors in the deaf subjects' understanding of truncated passive sentences. Rather, older and younger deaf students, regardless of reading level, demonstrated significantly improved comprehension when sentences were embedded in text.

LaSasso, Carol. The validity and reliability of the cloze procedure as a measure of readability for prelingually, profoundly deaf students. *American Annals of the Deaf*, August 1980, *125*, 559–563.

Examines the reliability and validity of the cloze procedure as a readability measure for deaf students. Each of 95 subjects, ranging in age from 14 to 18 and judged prelingually, profoundly deaf, took one cloze test at the third, fifth, and seventh-grade level of difficulty. The validity of the cloze procedure was examined by relating students' cloze scores on passages of varying difficulty with estimates of passage difficulty calculated with the Fry and Dale-Chall readability formulas. Although the cloze procedure was shown to be satisfactorily reliable with deaf subjects, with coefficients ranging from .67 to .82, the cloze scores were not predictive of passage difficulty. Therefore, the validity of the cloze procedure as a readability measure was not confirmed.

Reynolds, Horace N., & Booher, Harold R. The effects of pictorial and verbal instructional materials on the operational performance of deaf subjects. *Journal of Special Education*, Summer 1980, *14*, 175–187.

Compares the effectiveness of four instructional formats involving pictorial and verbal information variations on the learning of operational procedures by 56 deaf college students (M=20; F=36) enrolled in Gallaudet College. The effectiveness of instructional materials was measured by the performance variables of task completion time and error rate as students completed sequences of procedures on a complex control-display panel. The four types of instructional format included a) all pictorial; b) predominantly pictorial, with some ancillary verbal information; c) all verbal; and d) predominantly verbal with some ancillary pictorial information. Results showed that when both performance variables were considered, the best instructional format was predominantly pictorial, with some ancillary verbal information. The all-pictorial format produced short task completed times but relatively high error rates. The all-verbal and predominantly verbal formats generally yielded low error rates but longer task completion times.

Robbins, Nancy L., & Hatcher, Catherine W. The effects of syntax on the reading comprehension of hearing-impaired children. *Volta Review*, February/March 1981, *83*, 105–115.

Investigates the effect of syntactic competence on the reading comprehension of the hearing-impaired while controlling for levels of word recognition and knowledge of word meaning. Thirty-six subjects enrolled at the Iowa School for the Deaf, ranging in age from nine to twelve years, were given a sentence comprehension test containing active, passive, relative clause, conjunction, pronoun substitution, and indirect object constructions. Half the students, randomly selected, had been trained to recognize and comprehend the words used in 27 test sentences varying in syntactic form and difficulty. The other half received no training. All students read at the second grade level or higher. There was no difference in sentence comprehension between the groups. Results indicated that passives were most difficult, followed by relatives, conjunctions, pronoun substitutions, and indirect objects. Active sentences were easiest to understand.

VI–3 Mentally handicapped

ALLINGTON, RICHARD L. Sensitivity to orthographic structure in educable mentally retarded children. *Contemporary Educational Psychology*, April 1981, *6*, 135–139.

Investigates the development of a sensitivity to orthographic rules of 30 educable mentally retarded (EMR) subjects, and assesses the roles of intelligence and reading ability in the development of orthographic sensitivity in EMRs. Children from four intact EMR classrooms were labeled poorer and better reader on the basis of achievement test scores. All subjects were presented an item selection task to assess their sensitivity to orthographic structure in printed English. Groups did not differ significantly on the basis of IQ, chronological age, or mental age. Difference in reading achievement level was significant ($p < .001$). Analysis of variance revealed differences between the groups on task performance were also statistically significant ($p < .001$). An analysis of covariance (with mental age as the covariate) revealed a similar result: the performance of better readers was superior to that of poorer readers, indicating that reading ability, not intelligence, was the contributing factor to observed group differences. The researcher suggested that EMR children do acquire implicit knowledge of orthographic rules and that this ability is related to the development of reading skills.

GAJAR, ANNA H. Characteristics across exceptional categories: EMR, LD, and ED. *Journal of Special Education*, Summer 1980, *14*, 165–173.

Analyzes characteristics of 198 special education students (M=135; F=63) previously identified as educable mentally retarded (EMR), learning disabled (LD), or emotionally disturbed (ED) in order to validate their predictive value in discriminating among the three groups. Characteristics and measures typically used to identify these populations were categorized into three areas: a) cognitive (including IQ, reading achievement, and subtest scatter on the WISC); b) affective (rated on statistically interrelated patterns of behavior related to conduct, personality, and maturity); and c) demographic (related to SES). Data on all variables were gathered from psychological case histories and submitted to regression analysis. Data analysis revealed the significance of certain measures in identifying exceptional children. IQ, underachievement in reading, test-score scatter, conduct-disorder, and the personality-problem measures correctly classified 81.8% of the population. The question of educational relevance of the classification remained unanswered. EMR subjects earned lower IQs than the other groups while LD subjects had higher achievement and scatter scores. Emotionally disturbed students had higher scores on conduct-disorder and personality-problem measures.

HOUSE, BETTY J.; HANLEY, MICHAEL J.; & MAGID, DEBORAH F. Logographic reading by TMR adults. *American Journal of Mental Deficiency*, September 1980, *85*, 161–170.

Investigates the feasibility of a logographic writing system for trainable mentally retarded adults. Meaningful reading was defined as sentence comprehension measured by the ability to demonstrate an event described by a sequence of symbols. Ten moderately retarded adults (mean IQ=37) learned a set of 16 logographic signs. Through the use of dolls and toys, subjects enacted sentence comprehension. They were also asked to select signs and form a sentence after watching an experimenter-demonstrated event. All subjects were able to master signs and demonstrate sentences with only minor errors. About one-half of the subjects successfully constructed four- and five-word sentences. Most subjects selected a two-step sentence production method. The first involved collecting the signs in nonsentence order, and, second, arranging them in correct order. The data suggest that semantic aspects of the sentence were disengaged from the syntactic aspects.

LALLY, M. Computer-assisted teaching of sight-word recognition for mentally retarded school children. *American Journal of Mental Deficiency*, January 1981, *85*, 383–388.

Describes and evaluates a computer-assisted training program used to teach a sight vocabulary to 16 mildly and moderately mentally retarded school children (M=9; F=7). The training program was designed to supplement conventional methods of teaching by using aspects of computer technology to implement various learning principles that would otherwise be difficult to employ. Eight children were taught associations between the written and spoken versions of words by a "talking" computer. These children increased their sight vocabularies by an average of 128%; a comparison group had an increase of 34%. Further, this increase remained stable after 23 weeks following the completion of the four-week training program.

MCLAUGHLIN, T. F. Research note: The effects of individual and group contingencies on reading performance of special education students. *Contemporary Educational Psychology*, January 1981, *6*, 76–79.

Explores the effect of group and individual contingency conditions in controlling academic and social behavior of 10 special education children. Subjects ranged in ages from 9-6 to 11-1. Academic and observational data were collected daily during the reading period with consequences dependent on accuracy in programmed reading materials and extent of negative peer comments. During the group contingency condition, pupils earned points based on accuracy and exchanged them for special privileges based on the average performance of the group. The individual contingency condition was such that the same point totals were awarded by yoking pupils to the group behavioral criteria. Results indicated greater accuracy for all 10 pupils with the group condition; in addition, students indicated a slight preference for the group contingency phase. Frequency of negative peer comments was low in all conditions (0-3).

VI–4 Other atypical learners

AVIEZER, YA'ARA, & SIMPSON, SEYMOUR. Variability and instability in perceptual and reading functions of brain-injured children. *Journal of Learning Disabilities*, June/July 1980, *13*, 327–333.

Investigates variability and instability in the perceptual and reading performance of brain-injured and normal children. Thirty-four children enrolled in a school for the brain-injured and 40 children in regular classrooms served as subjects. Each group was divided into younger (6 to 7 years old) and older (10 to 11 years old) children, and the two groups were matched for age, IQ, and socioeconomic background. A battery of perceptual, cognitive, and reading tasks was given individually three times with a two-week interval between the first and second testing and a two-month interval between the second and third testing. Auditory and visual sequential memory and eye-hand coordination subtests were included in the perceptual testing; the picture categorization subtest of the *Kuhlman-Anderson Test* was used to determine cognitive performance; reading ability was assessed on four ascending levels derived from various reading test material (unnamed). With the older children, a significant difference was noted for the two groups on all tests except auditory sequential memory. Both younger groups displayed instability, but no significant differences were found between the brain-injured and the normal younger age groups on seven of the eight tests.

ROSS, ALISON J. A study of the application of Blissymbolics as a means of communication for a young brain damaged adult. *The British Journal of Disorders of Communication*, September 1979, *14*, 102–109.

Reports the effectiveness of teaching Blissymbolics, an international means of communication using symbols for words and concepts, to a severely brain-injured young adult. At the time of an initial encounter with a speech therapist six months following a traffic accident, the subject was age 14-3, and had receptive language at a one-year-old level. At the time of discharge from therapy 22 months later, she had much improved receptive language, achieved silent reading comprehension at a functional level, and recovered spelling and mathematics skills. Speech, however, was through gross gesture and facial expression. Blissymbols were introduced through twice-weekly sessions of 30-40 minutes each for four months. The subject greatly expanded her ability to communicate (i.e., to form questions and express opinions). The researcher concluded that Blissymbols contribute to the rehabilitation of the adult, especially as modified to accommodate problems due to brain damage and as integrated with other means of communication.

ADAMS, MARTIN R., & RAMIG, PETER. Vocal characteristics of normal speakers and stutterers during choral reading. *Journal of Speech and Hearing Research*, June 1980, *23*, 457–468.

Tests the postulate that stutterers and normal speakers would alter their vocalization when reading in unison with another person not physically present. Ten stutterers and ten normal speakers were tested in a control and choral reading condition. In the former, subjects read in their habitual manner. In the latter, subjects read in unison with a recording of an adult male. Subjects' oral readings were audio-taped and then submitted to spectographic analysis. Measures of vowel duration, peak vocal Sound Pressure Level (SPL), and continuity of phonation were made and then treated statistically. The major findings indicated that, across the two conditions, both groups failed to modify their vocal SPL and continuity of phonation. They did, however, alter their vowel durations. Normal speakers increased theirs by a statistically insignificant amount, while stutterers significantly shortened theirs. Results that pertained to vocal SPL and vowel durations seemed a function of each group's scores in the control condition as compared to the values for the same measures that were generated by the model reader.

DEAN, RAYMOND S. The use of the Peabody Picture Vocabulary Test with emotionally disturbed adolescents. *Journal of School Psychology*, Summer 1980, *18*, 172–175.

Examines the validity (predictive and concurrent) and reliability (stability and internal consistency) of the *Peabody Picture Vocabulary Test* (PPVT) to determine the appropriateness of its psychometric properties for testing emotionally disturbed adolescents. Fifty-two (M=26; F=26) nonpsychotic adolescents were administered the PPVT and subtests of the *Peabody Individual Achievement Test* (PIAT). Scores of the PPVT were correlated with those of the PIAT and were retained as predictors. After six months, subjects were readministered the PPVT and PIAT in the criterion phase of the study. In all cases but four, subjects had been discharged as patients of a state psychiatric institution at the time of retesting. Significant increases in PPVT IQ and PIAT reading comprehension scores were found upon readministration. The internal consistency estimate for the initial PPVT administration showed considerable consistency in responding within the test for children who exhibit severe emotional problems. A modest temporal stability estimate indicated a fair amount of fluctuation in scores over time. Concurrent validity coefficients for the PPVT indicated moderate to dependable relationship with PIAT subtests. Predictive validity estimates for the PPVT suggested moderate relationships with future achievement, accounting for some 26% of the variability in total achievement.

FORNESS, STEVEN R.; THORTON, ROBERT L.; & HORTON, AMY A. Assessment of applied academic and social skills. *Education and Training of the Mentally Retarded*, April 1981, *16*(2), 104–109.

Reports the development of an assessment technique designed to estimate the applied academic and social skills of developmentally disabled adolescents, as well as present an analysis of data on the concurrent validity of the instrument. In order to determine the readiness of disabled adolescents with psychiatric disorders for prevocational or hobby activities, and to provide data on academic and social competencies of various handicapped students, the *Applied Assessment Instrument* (AAI) was developed. Included in the assessment were tests of reading, number, social, and motor skills drawn from typical work or hobby projects in prevocational classrooms. Thirty patients (M=17; F=13) in the UCLA Neuropsychiatric Institute (NPI) were administered the AAI and the *California Achievement Test* (CAT) vocabulary and comprehension subtests; a behavior rating was completed on each by NPI classroom teachers. Moderate but significant correlation coefficients found between the CAT, the behavior rating, and AAI tended to support concurrent validity of the AAI. Scores on AAI reading did not correlate as highly with CAT vocabulary as with CAT reading comprehension.

MANSCHRECK, THEO C.; MAHER, BRENDAN A.; & RUCKLOS, MARY E. Cloze procedure and written language in schizophrenia. *Language and Speech*, October to December 1980, *23*, 323–328.

Investigates the sensitivity of the cloze technique in various modes of language response in schizophrenia on the basis of the contention that schizophrenic utterances are less predictable than non-schizophrenic controls. Ten adult psychiatric subjects (M=8; F=2) and 10 normal subjects (M=3; F=7) provided both written and oral language samples of 200 words each in response to busy picture scenes. At the same time they completed an initial structured psychiatric interview. Each of the language samples was submitted to either fourth- or fifth-word cloze deletion. Five normal raters attempted to complete the blanks in the macerated language samples. The cloze score obtained was the percentage of exact words guessed correctly. Written samples were more predictable than spoken samples for both deletion procedures among the schizophrenics. For nonschizophrenics, predictability of written samples (relative to spoken ones) also increased, but not significantly. Cloze scores of spoken samples did distinguish the two groups. Analysis of variance revealed the difference to be due to the clinically thought disordered patients included in the sample.

Journals Monitored for the Annual Summary

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Adult Education (British-NIAE)
Action Teacher Education
Academic therapy
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American Behavioral Scientist
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Author Index, Summary of investigations relating to reading, July 1, 1980 to June 30, 1981

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